ILLUSTRATIONS

OF THE

SALTS OF THE URINE, URINARY DEPOSITS AND CALCULI,

INCLUDING

THE STRUCTURE OF THE KIDNEY IN HEALTH AND DISEASE; MICROSCOPICAL AND CHEMICAL APPARATUS, ENTOZOA, &c.

SEVENTY PLATES,

CONTAINING UPWARDS OF 400 SEPARATE FIGURES, CAREFULLY COPIED FROM THE OBJECTS THEMSELVES,

BY

LIONEL S. BEALE, M.B., F.R.S.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS; PHYSICIAN TO KING'S COLLEGE HOSPITAL; PROFESSOR OF PHYSIOLOGY AND OF GENERAL AND MORBID ANATOMY IN, AND HONORARY FELLOW OF, KING'S COLLEGE, LONDON.

SECOND EDITION,

WITH TWICE THE NUMBER OF PLATES.

LONDON:

JOHN CHURCHILL & SONS, NEW BURLINGTON STREET.

MDCCCLXIX.

PREFACE.

THE number of Plates has been increased from thirty-five to seventy, and there are two hundred and forty-five more figures than in the first edition. Many of the old drawings have been re-engraved, and nearly one hundred new ones have been introduced.

It is hoped that by the aid of the Work in its present form, the Practitioner will be enabled to ascertain the nature of any urinary deposit which may fall under his notice, without difficulty or loss of time.

L. S B.

61, GROSVENOR STREET,
October, 1868.

EXPLANATION OF THE PLATES.

STRUCTURE OF THE KIDNEY.

Plate I. Fig. 1. Diagram showing the general anatomy of the human kidney as seen upon section. About two thirds the natural size. The scale at the side is divided into eight spaces representing half inches, p. 2. Fig. 2. Thin section of a portion of the human kidney. Fig. 3. Arrangement of the secreting structure and vessels of the kidney of man, magnified about 50 diameters, p. 4.

Plate II. Fig. 4. Part of the cortex with the commencement of the medullary portion of the human kidney, magnified 15 diameters. Fig. 5. Uriniferous tube with dilated extremity which embraces the vessels of the Malpighian tuft. Fig. 6. Small artery with tuft and capillary network, p. 6.

Plate III. Fig. 7. Convoluted portion of uriniferous tube with epithelium from the cortical portion of the kidney. Fig. 8. Straight portion of uriniferous tube from the base of a pyramid. Fig. 9. Epithelium from the pelvis of the kidney in part tessellated and in part columnar. Fig. 10. Epithelium scraped from the surface of a pyramid. Fig. 11. Epithelium from the ureter, entirely columnar. Fig. 12. Columnar epithelium from the urethra, p. 6.

Plate IV. Fig. 13. Vasa recta in the pyramidal portion and Malpighian bodies in the cortical portion of the kidney. Fig. 14. Capillary vessels from Malpighian tuft of human kidney showing the nuclei connected with their walls. Fig. 15. Thin section of healthy human kidney slightly washed in water. Fig. 15A. Uriniferous tube bent upon itself, at *a*, in the pyramid of the kidney. The looped tube of Henle. Fig. 16. Epithelium from a uriniferous tube. Human kidney. *a* treated with acetic acid. Fig. 17. Epithelium from the pelvis of human kidney. Fig. 17A. Young and growing Malpighian body of a child's kidney. The muscular fibre cells are seen on the artery quite close to the Malpighian body, p. 12. Fig. 18. Epithelium from the ureter.

Plate V. Fig. 19. Part of the convoluted portion of a uriniferous tube from the newt's kidney, showing capillary vessels and nerve fibres and the thickened basement membrane continuous in structure with the connective tissue. Fig. 19A. Malpighian body and tube of the newt's kidney. Fig. 20. Ganglia. Hilus of kidney. Young pig. Fig. 21. Ganglion from the pelvis of the kidney of a boy three years of age showing small arteries and capillaries, nerve cells, and bundles of nerve fibres. Fig. 22. Delicate nerve fibres entering into the formation of the bundles connected with the ganglia of the kidney, showing their arrangement and their nuclei. Fig. 23. *a*. Section of cortical portion of healthy kidney (human) washed and examined in water. The capillaries were not injected and having collapsed and shrunk exhibit the fibrous appearance which is considered to depend upon the matrix. *b*. Section of

another part in which the vessels were injected. The nuclei on their coats are seen, but no 'fibrous matrix,' p. 16.

Plate VI. Fig. 24. Section of the cortical portion of a human kidney the vessels of which have been injected with the Prussian blue solution, *a*, membrane of the tubes. The *a* to the right of the figure shows the position of a Malpighian body; *b*, a portion of a capillary loop of a Malpighian body; *c*, venous capillaries lying between the uriniferous tubes. In many places the double-shaded line indicates the basement membrane of the tubes; *d*, position of the uriniferous tube. Fig. 25. Transverse section at the base of a pyramid. Fig. 26. A similar section a short distance lower down, showing uriniferous tubes cut across. The small tubes join the larger ones at a point lower than that at which the section is made. Fig. 27. Section nearer the apex of the pyramid. Fig. 28. Apex of a pyramid showing the manner in which the uriniferous tubes open into the pelvis of the kidney, p. 16.

Plate VII. Fig 29. Uriniferous tubes, some of which are choked with a deposit consisting of albuminous matter and blood. Fig. 30. Transverse section of the tubes of the kidney of a snake occupied by large crystals of uric acid. Fig. 31. Crystals of leucine in the substance of kidney. Human subject. Fig. 32. Crystals of leucine more highly magnified. Fig. 33. A small portion of the small ganglion represented in fig. 21, plate V, but magnified 700 diameters, showing ganglion cells and their connection with the nerve fibres. Fig. 34. Tubes of human kidney with earthy phosphates precipitated amongst the cells. Fig. 35. *a*, portion of uriniferous tube; *b*, capillary vessel; *c*, nerve fibres. Kidney of a child, age three years, p. 16.

Plate VIII. Fig. 36. Part of the thin portion of the kidney of the female newt. *a*, portion of straight tube continuous with ureter; *b*, collection of fatty matter, perhaps a wasted Malpighian body; *c*, *c*, remarkable diverticula connected with tubes just below the Malpighian body. The capillaries are also represented. Fig. 37. Malpighian body and portion of uriniferous tube with remarkable diverticulum. Female newt. At *a*, a bud projects from the diverticular tube as if a branch were growing from it. Fig. 38. Tube *a*, containing spermatozoa from which some Malpighian bodies and uriniferous tubes of the male newt are developed. An old ganglion which has undergone degeneration, and new ganglion cells are also seen at *b*. Fig. 39. Distribution of nerves and ganglia over thin part of the kidney of the male newt. *a*, vas deferens: the uriniferous tubes opening into it; *b*, artery; *c*, vein. The numerous ganglia and nerve fibres are seen ramifying over the vessels and tubes. Fig. 40. Diverticulum from tube. Male newt's kidney. Fig. 41. Tube containing spermatozoa, showing connection with uriniferous tubes and Malpighian bodies. One of the latter is double. Male newt, p. 32.

Plate IX. Fig. 42. Tube of kidney of female newt, part of which has undergone wasting. The healthy portion of the tube is seen to the right of the figure. Nerve fibres are also shown in some places. Fig. 43. *a*, portion of a capillary vessel of the kidney distended with altered white blood corpuscles; *b*, round flattened cells from inner surface of capsule of the Malpighian body; *c*,

nucleus of the capillary wall. Acute suppurative nephritis. Fig. 44. Portion of a cast magnified 700 diameters with cells in the central part resembling white blood corpuscles which have probably multiplied while they were entangled in the coagulable material of the cast. Fig. 45. Casts containing cells like pus and blood corpuscles. Acute suppurative nephritis; three days before death. Fig. 46. Small casts formed in the convoluted portion of the uriniferous tubes, which have become embedded in transparent material during their passage down the straight portion, p. 48.

Plate X. Fig. 47. Portion of a cast with distinct cells, showing nuclei and granular contents. Fig. 48. Bodies found between the capillaries of the Malpighian body and the walls of the capsule. Case of acute suppurative nephritis. Fig. 49. A portion of one of the capillary loops of a Malpighian body distended with modified white blood corpuscles Fig. 50. Separate cells found in the urine. Case of acute suppurative nephritis. Fig. 51. Malpighian bodies, showing different degrees of wasting. Fig. 52. Tubes of the kidney degenerated and wasted. Fig. 53*. Dumb-bell crystals of oxalate of lime impacted in the tubes of a kidney, forming minute calculi. Fig. 53. Multiplication of masses of germinal matter about tubes prior to wasting. Fig. 54. Portion of a tube from the cortex of the kidney of a healthy cat, containing much oil. Fig. 55. Malpighian body and portions of uriniferous tubes with capillary vessels containing much oil. From a kidney of a diabetic, p. 48.

Plate XI. Fig. 56. *a*, wasting tube with oil globules in the interior; *b*, a tube containing a transparent waxy cast, with germinal matter resulting from altered epithelium. Fatty and contracting kidney. Fig. 57. Thin section of the cortex of a fatty and contracting kidney, showing the remains of tubes and vessels in what is generally considered as the 'matrix.' *a*, the remains of a tube appearing as a connective tissue corpuscle; *b*, small artery with thickened walls. Fig. 58. Section of cortex of fatty and contracting kidney. Fig. 59. Epithelium of tube much altered. Walls of tube much thickened. × 700. Fatty and contracting kidney. Fig. 60. Loops of vessels of the Malpighian tuft distended with granular matter and containing oil globules. Fig. 61. Capillaries Malpighian body. Fatty and contracting kidney. Bacteria are seen in the interior of the vessel, the walls of which are very much thickened. Fig. 62. Portion of very transparent matrix showing the remains of uriniferous tubes. Fatty and contracting kidney. Fig. 63. Portion of altered tube with a bud growing from it. Fatty and contracting kidney. Fig. 63*. Section of uriniferous tubes in various stages of wasting and degeneration. Fatty and contracting kidney. In some of the tubes there is much oil, p. 64.

Plate XII. Fig. 64. Section of cortex of kidney undergoing contraction and fatty degeneration. At *a*, the process of wasting is complete; at *b*, a portion of the matrix showing varying size of the tubes. Under the low magnifying power of 40 the wasted tubes and vessels cannot be seen in the specimen. At *c*, much fatty matter with crystals, probably of cholesterine. Fig. 65. Section of an amyloid kidney showing altered tubes, with increased number

of altered epithelial cells. A Malpighian body with amyloid matter deposited in the capillary walls is seen in the centre, and portions of thickened arteries in different parts of the specimen. Fig. 66. Capillary vessels with nerves of capillaries. Skin of frog. Fig. 67. Small capillary with nerve fibres *a*. Healthy human kidney. Fig. 68. Wasting capillaries from a fatty and contracting kidney. Circulation through these vessels must have ceased sometime before the patient's death. Fig. 69. Altered Malpighian body. Fatty and contracted kidney. Capillaries obstructed. Tube of artery containing altered blood and angular particles of blood colouring matter, p. 70.

Plate XIII. Fig. 70. Arteries from a fatty and contracting kidney, showing complete degeneration of muscular fibre cells and the deposition of glistening albuminous material. The walls of the artery have probably long lost all contractile power and are converted into rigid inelastic tubes, the inner surface of which is uneven, with great irregularity in calibre. Fig. 71. A healthy artery from the kidney of a child three years old, showing muscular fibre cells and longitudinal nuclei of muscular and elastic fibres within. Fig. 72. Artery from the peritoneum of a frog which had been kept for some time without food, showing wasting of muscular fibre cells and great diminution in calibre. In its present wasted and contracted state the external areolar coat is many times the diameter of the vessel. Fig. 73. A transverse section of a small artery from the same kidney as fig. 70. Fig. 74. Artery from the same kidney as figs. 70 and 73, showing great irregularity of calibre and degenerated muscular coat. Oil globules and débris are seen in the interior, p. 74.

Plate XIV. Fig. 75. Full-size representation of section of the right kidney, showing the enormous development of cysts throughout its substance. The presence of these growths is evidently due to intra-uterine disease of the fœtus. From a drawing by Dr. Jardine Murray, p. 80.

CHEMICAL AND MICROSCOPICAL APPARATUS.

Plate I. Fig. 1. Conical glass for allowing deposits from fluids to subside. Fig. 2. Test-tubes, rack and drainer. Fig. 3. Wire triangle for supporting platinum capsules or foil. Fig. 4. Another wire triangle. Fig. 5. Wash-bottle for washing precipitates. Fig. 6. Represents the mode of folding the paper used for filtering purposes. Fig. 7. Pipettes. Fig. 7*. Pipette forming stopper. Fig. 8. Small retort stand. Fig. 9. Simple form of water-bath. Fig. 10. Ring used as an adapter for fitting various-sized basins to the simple water-bath. Fig. 11. Spirit-lamp, p. 92.

Plate II. Fig. 12. Retort stand, funnel, and beaker arranged for filtering. Fig. 13. Glasses of convenient form both for obtaining the specific gravity of fluids and also for collecting the deposits from fluids. Fig. 14. Urinometers for ascertaining the specific gravity of fluids. Fig. 15. Bottle for finding the specific gravity of fluids by weight. Fig. 16. Bottle with capillary orifice. Fig. 17. Animalcule cage, also used for examining urinary deposits, &c., under the microscope. Fig. 18. Simple glass cell for examining

urinary deposits. Fig. 19. Box containing bottles with capillary orifices, spirit-lamp, urinometer and glass, and other appliances and apparatus necessary for minute testing, p. 94.

Plate III. Fig. 20. Pocket or clinical microscope, half the real size. *a*, tube with eye-piece; *b*, tube carrying object-glass; *c*, tube in which the last slides with stage; *e*, clamp for fixing preparation. Fig. 21. Clinical microscope with stand and lamp as arranged for class purposes. Fig. 22. The stage, side view of the clinical microscope showing position of the spring. Fig. 23. Sectional view of cell for examining urinary deposits. Fig. 24. Neutral tint glass reflector. Fig. 25. Scale divided into 1,000ths of an inch and magnified 215 diameters, for measuring the size of objects in the microscope. Fig. 26. Manner of drawing objects from the microscope with the aid of the neutral tint glass reflector, p. 96.

Plate IV. Fig. 27. Burette holding 50 cubic centimetres and graduated to half cc., mounted in its stand and arranged as in making analyses. Fig. 28. Filter used in volumetric analyses for filtering off clear solution from precipitate. Fig. 29. Double burette stand graduated to dcm., with flasks and pipettes used in volumetric analyses. Fig. 30. Pipette. Fig. 31. Another form of pipette. Fig. 32. Arrangement for collecting deposit from a very small quantity of fluid. Fig. 33. Apparatus arranged by Dr. Handfield Jones for estimating the proportion of urea in urine, p. 104.

ILLUSTRATIONS OF THE SALTS OF THE URINE.

Plate I. Fig. 1. Crystalline residue of healthy urine obtained by concentrating the liquid over a water-bath: *a*, spherical masses consisting of aggregations of crystals of urate of soda. Many of these are seen deposited upon a film consisting of phosphate of lime and ammoniaco-magnesian phosphate; *b*, cubical crystals of chloride of sodium; *c*, octahedral crystals of chloride of sodium which crystallised in this form in the presence of urea; *d*, large crystals of common phosphate of soda; *e*, sulphates; *f*, urates. Fig. 2. Crystals of inorganic salts of healthy urine, obtained by incinerating the dry residue, decarbonising it and extracting it with water. The solution being concentrated to the proper degree readily crystallises: *a*, crystals of common salt obtained by evaporating the solution nearly to dryness; *b*, crystals of common salt in a concentrated solution; *c*, crosslets of common salt obtained by evaporating the solution very rapidly; *d*, crystals of phosphate of soda; *e*, crystals of sulphates, p. 130.

Plate Ia. Fig. 3. Chloride of ammonium. Fig. 4. Crystals of uric acid. Fig. 5. Oxalate of urea, obtained by adding oxalic acid to urine. Fig. 6. Crystals of indigo: *a* and *b* obtained by sublimation; *c*, small crystals in fluid. Fig. 7. Nitrate of urea: *a*, crystals obtained from urine; *b*, crystals of pure nitrate of urea. Fig. 8. Crystals of uroglaucine from urine: *a*, small masses of a blue colour; *b*, composed of small spherical particles; *c*, crystals of uroglaucine of a deep purple or violet colour. Fig. 9. Urea obtained from urine. Fig. 10. Crystals of hippuric acid, p. 130.

Plate II. Fig. 1. Urea obtained from urine crystallised in its own mother liquor. Fig. 2. The same as fig. 1, examined in the dry way. Fig. 3. Small crystals of urea formed in a concentrated

solution of natural urea. Fig. 4. Similar crystals of urea of larger size. Fig. 5. Artificial urea crystallised, examined in the dry state, p. 132.

Plate III. Fig. 1. Crystals of nitrate of urea formed by adding excess of nitric acid to concentrated urine. Fig. 2. Nitrate of urea, formed by adding a quantity of nitric acid not sufficient to combine with the whole of the urea present. Fig. 3. Nitrate of urea obtained by adding a moderate quantity of nitric acid to slightly concentrated urine in a test-tube, and allowing it to crystallise slowly. Fig. 4. Nitrate of urea, obtained by adding a marked excess of nitric acid. Fig. 5. Nitrate of urea formed by adding only two drops of nitric acid to highly concentrated urine. Fig. 6. Crystals of pure nitrate of urea obtained by dissolving some of the nitrate in water and evaporating so that crystals may form, p. 134.

Plate IV. Fig. 1. Crystals of oxalate of urea obtained by re-crystallising nearly pure oxalate of urea from an aqueous solution: *a*, dendritic masses in which the form of the crystal is not very distinct; *b*, masses of well-formed crystals; *c*, perfect crystals of oxalate of urea. Fig. 2. Crystals of oxalate of urea obtained by evaporating healthy urine to dryness and extracting the residue with alcohol. The alcoholic solution being then evaporated to dryness and water added until the residue had a syrupy consistence. To this oxalic acid crystals were added in sufficient quantity to form an oxalate with the urea present; *d* represents the general character of the crystals of oxalate usually formed in this manner; *e*, more perfect crystals, p. 136.

Plate V. Fig. 1. Urate of magnesia crystallised in tufts. Fig. 2. Urate of magnesia showing the separate forms of the crystals. Fig. 3. Urate of lime, crystallised in tufts composed of long acicular crystals. Fig. 4. Uric acid, precipitated by adding hydrochloric acid to urate of potash. Fig. 5. Uric acid deposited from urine, p. 138.

Plate VI. Fig. 1. Alloxan, crystallised from an aqueous solution obtained from uric acid. Fig. 2. Alloxantin prepared from uric acid. Fig. 3. Parabanic acid obtained from uric acid. Fig. 4. Crystals of creatine. Fig. 5. Crystals of inosite. Fig. 6. Lactate of copper, p. 140.

Plate VII. Fig. 1. Compound of chloride of zinc and creatinine as it is obtained from urine. Fig. 2. Compound of chloride of zinc, and creatinine after re-crystallisation in water. Fig. 3. Crystals of creatine obtained from the chloride of zinc compound, crystallised from an aqueous solution. Fig. 4. Crystals of creatinine obtained from the chloride of zinc compound, p. 142.

Plate VIII. Fig. 1. Alloxanic acid. Fig. 2. Oxaluric acid. Fig. 3. Oxalurate of ammonia. Fig. 4. Oxalurate of lime. Fig. 5. Uramile. Fig. 6. Oxalurate of magnesia, p. 144.

Plate IX. Fig. 1. Hippuric acid. Fig. 2. Hippurate of lime. Fig. 3. Allantoin. Fig. 4. Murexid. Fig. 5. Thionuric acid. Fig. 6. Thionurate of ammonia, p. 146.

Plate X. Fig. 1. Crystals of chloride of sodium examined in their own mother liquor. Fig. 2. Phosphate of lime in a crystalline form. Fig. 3. Phosphate of lime, granular. Fig. 4. Crystals of triple phosphate in the form of triangular prisms, p. 160.

Plate XI. Fig. 1. Fructification of penicillium glaucum. Fig. 2. The

sugar fungus from diabetic urine. Fig. 3. Fructification of yeast fungus. Fig. 4. Human kidney, showing greatly dilated pelvis and calyces, shrunken pyramids and diminished cortical portion. Fig. 5. Modification of Mitscherlich's saccharimeter for determining the proportion of sugar in fluids. Fig. 6. Flask adapted for the estimation of carbonic acid gas, used in determining the proportion of sugar in fluids by the fermentation test, p. 252.

Plate XII. Fig. 1. Mode of crystallisation of diabetic sugar. Fig. 2. Separate crystals of diabetic sugar. Fig. 3. Crystals of leucine from urine. Fig. 4. Crystals of leucine from urine. Fig. 5. Crystals of tyrosine. Fig. 6. Cystine from urine, p. 280.

ILLUSTRATIONS OF URINARY DEPOSITS—EXTRANEOUS MATTERS.

Plate I. Fig. 1. Portions of hairs from a blanket. Fig. 2. Fragments of human hair. In some the central canal occupied with the soft cells of the medulla is represented. Fig. 3. Fragments of cat's hair. Some near the apex and others close to the root of the hair. Fig. 4. Fibres of silk: *a*, white silk; *b*, black silk. Fig. 5. Scales of moth, p. 249.

Plate II. Fig. 6. Cotton fibres. A small fibre in the upper part of the figure is seen to be twisted round a larger one. Fig. 7. Portions of flax fibres. Fig. 8. Portions of feathers. The knotted pieces represented are obtained from the lower part of the shaft of the feather. Fig. 9. Fibres of deal wood swept from the floor. Fig. 10. Elements of dust swept from a shelf, p. 296.

Plate III. Fig. 11. Potato starch. Its appearance in water. Fig. 12. Wheat starch in water. Fig. 13. Rice starch in water. Fig. 14. Testa of wheat. External and inner coverings of the wheat grain. Fig. 15. Bread crumbs in water. The starch granules are swollen and softened, but still preserve their form. Fig. 16. Cells of tissue of potato in which the starch is contained. A few of the cells are filled with starch granules, p. 298.

Plate IV. Fig. 17. A portion of tea-leaf. Fragments of spiral vessels are seen projecting from several parts of the margin. Fig. 18. Air bubbles. Appearance in water. Fig. 19. Oil globules. Milk. Fig. 20. Oil globules, some free and some contained in cells. Fig. 21. Globules, consisting of phosphate of lime; from urine. Fig. 22. Extraneous substances frequently met with in urine. Fig. 23. Epithelium and fungi from the mouth. Fig. 24. Portions of partially digested muscle. From vomit, p. 300.

Plate V. Fig. 25. Urate of soda, obtained by concentrating healthy urine. Fig. 26. Molecular fatty matter of chylous urine. Fig. 27. Urate. Ordinary granular deposit usually termed urate of ammonia. Fig. 28. Crystals of cholesterine obtained from the fatty matter in casts separated from the urine of a case of fatty degeneration of kidneys. Fig. 29. Pus and blood corpuscles with crystals of triple phosphate, from the urine of a man suffering from fungus growths connected with the mucous membrane of the bladder. Fig. 30. Oil globules of milk, p. 312.

Plate VI. Fig. 31. Mucus and mucus corpuscles. Urine. In the upper part of the figure to the right several cells of bladder epithelium are represented. Fig. 32. Penicillium glaucum

developed in acid urine : *a*, within twelve hours after the urine was passed ; *b*, one day after ; *c*, two days after ; *d*, four days after ; *e*, five days after ; *f*, after standing six days. Fig. 33. Algæ and vibriones from urine three days after it was passed. Fig. 34. Vegetable organisms met with in urine : *a*, different forms of fungi ; *b*, vibriones. Fig. 35. Bacteria undergoing germination. Fig. 36. Bacteria germs in old epithelial cells of the mouth. Fig. 37. Bacteria. Fig. 38. Bacteria. Fig. 39. Penicillium glaucum found in diabetic urine four days after it was passed. Fig. 40. Penicillium glaucum from acid urine. Fig. 41. Penicillium glaucum. Fig. 42. Penicillium glaucum from acid urine. Fig. 43. The sugar fungus from diabetic urine. Fig. 44. Yeast added to diabetic urine and allowed to stand in a warm place forty-eight hours, showing growth of the torula, p. 324.

Plate VII. Fig. 45. Fructification of yeast fungus. Fig. 46. Fungi formed in acid urine. Several spermatozoa are seen amongst the fungous filaments. Fig. 47. Fructification of penicillium glaucum. Fig. 48. Penicillium glaucum. The oval spores growing into thalli. Developed in urine about fifty hours after it was passed. Fig. 49. Fungi formed in acid urine. Fig. 50. Sporules of fungi resembling blood corpuscles. Fig. 51. Curious fungi formed in the urine of a young man who passed much oxalate of lime. Fig. 52. Penicillium glaucum. Fig. 53. Sarcinæ ventriculi, ordinary size from vomit. Fig. 54. Sarcinæ from vomit, p. 326.

Plate VIII. Fig. 55. Epithelium from the convoluted portion of the uriniferous tube : *a*, treated with acetic acid. Fig. 56. Epithelium from the kidney. Human. Fig. 57. Epithelium from the ureter. Fig. 58. Epithelium from the urethra. Fig. 59. Bladder epithelium : *a*, from the general surface ; *b*, from the fundus ; *c*, scales from the bladder. Fig. 60. Vaginal epithelium from urine. Fig. 61. Epithelium from the bladder, showing the hollows in some of the large cells into which the subjacent columnar cells fit. Fig. 62. Epithelium from the vagina. Fig. 63. Young epithelial cell from the bladder undergoing division. Fig. 64. Formation of pus from germinal matter of epithelial cells, p. 328.

Plate IX. Fig. 65. Membranous substance passed with a blood clot during the menstrual period, probably from the vagina. From a preparation of Dr. Tilt's. Fig. 66. Fragment of uterine cast passed by a lady age 25. Fig. 67. Another fragment of uterine cast composed entirely of epithelium. Fig. 68. Cast of the womb and vagina, the mucous covering belonging to the former cavity being inverted, p. 328.

Plate X. Fig. 69. Casts of the seminal tubes. Spermatozoa embedded in them, from an old man upwards of 80 years of age. Fig. 70. Spermatozoa and cells of vaginal epithelium removed from the vagina of a little girl a few hours after a rape had been committed. Fig. 71. Spematozoa from urine. Fig. 72. Spermatozoa with urate deposited upon them. Fig. 73. Long narrow threads of viscid mucus associated with the presence of spermatozoa in casts of the seminal tubules. From the urine of a case of slight irritability of the neck of the bladder. Fig. 74. Filaments of a vegetable nature, resembling spermatozoa. Fig. 75. Body and upper part of the tail of spermatozoon magnified upwards of 3,000 diameters : *a*,

spermatozoon containing much germinal matter; *b*, the same seen edgeways; *c*, spermatozoon containing comparatively little germinal matter; *d*, spermatozoon, crushed, showing separate spherical particles of germinal matter, p. 330.

Plate XI. Fig. 76. Spermatozoa and crystals of phosphate of urine from the seminal fluid. Fig. 77. Waxy casts: *a*, of large size; *b*, small waxy casts. Fig. 78. Casts containing oil globules and free fat cells from a case of fatty degeneration of the kidney. Fig. 78A. Small granular casts from the urine of a patient suffering from chronic nephritis. Fig. 79. Large casts, some containing many cells, others consisting of a perfect transparent wax-like material. Fig. 80. Epithelial casts: *a*, casts containing cells of epithelium; *b*, casts containing granular matter; from urine of acute dropsy, p. 340.

Plate XII. Fig. 81. Mucus cast from the straight portion of the uriniferous tubes, showing the manner in which the large renal tubes divide and subdivide as they pass towards the base of the pyramids. Fig. 82. Mucus casts with dark brown urate deposited upon their surface and in their substance. Fig. 83. Waxy casts of large and small diameter. Fig. 84. Portion of a mucus cast which has been formed around a smaller or serpentine one. Fig. 85. Casts containing blood corpuscles, from a case of acute nephritis, p. 342.

Plate XIII. Fig. 86. Epithelial and granular casts from the urine of a woman suffering from acute nephritis with dropsy: *a*, epithelial casts; *b*, casts containing brown granular matter and blood corpuscles; *c*, granular casts of a brown colour, many of them containing a few oil globules; *d*, squamous epithelium from the vagina; *e*, epithelium from the bladder; *f*, cells containing oil globules; *g*, portion of a cast containing oil globules; *h*, circular granular cells; *i*, fibre of flax; *k*, blanket hair. Fig. 87. Casts from a case of chronic nephritis: *a*, dark granular casts; *b*, casts containing small granular cells and white blood corpuscles; *c*, waxy casts; *d*, large cast flattened by pressure, containing white blood corpuscles; *e*, portion of a cast containing a large cell filled with oil globules; *f*, pus corpuscles; *g*, collections of small oil globules; *h*, large cell containing smaller cells; *i*, portions of cotton fibre; *k*, piece of very thin human hair; *l*, fragment of flax, p. 346.

Plate XIV. Fig. 88. Casts. Acute inflammation of the kidney, from the urine of a man, age 45: *a*, perfectly transparent wax-like casts; *b*, a very long wax-like cast; *c*, casts filled with cells resembling pus corpuscles, but somewhat larger; *d*, the same cells free; *e*, portion of feather; *f*, piece of cotton fibre; *g*, portion of human hair; *h*, flax fibre, p. 348.

Plate XV. Fig. 89. Casts chronic nephritis: *a*, casts of large diameter containing granular matter scattered round them unequally; *b*, a very long clear and perfectly transparent cast containing minute oil globules here and there; *c*, dark granular casts; *d*, large masses of granular matter many of them appearing like granular cells; most of these are derived from the mucous membrane covering the glans; *e*, cells of renal epithelium; *f*, masses of squamous epithelium; *g*, free oil globules; *h*, portion of cotton fibre; *i*, portion of feather, p. 350.

Plate XVI. Fig. 90. Casts containing oil, from the urine of a case of

fatty degeneration of the kidney of long standing. Fig. 91. Cholesterine obtained from the fatty matter in casts separated from the urine of a case of fatty degeneration of the kidney, p. 350.

Plate XVII. Fig. 92. Casts of the uriniferous tubes, from a case of acute nephritis. Fig. 93. Portion of a cast. Acute nephritis. Fig. 94. Portion of a cast with distinct cells, perhaps altered white blood corpuscles. Fig. 95. Shrivelled and wasted uriniferous tubes. Fig. 96. Dumb-bell crystals in casts, proving that these curious crystals are formed in the uriniferous tubes. From the urine of a case of cholera, p. 350.

Plate XVIII. Fig. 97. Ordinary granular deposit usually termed urate or lithate of ammonia but consisting of urate of soda with small quantities of urates of ammonia, lime, and magnesia. Fig. 98. Urate of soda prepared artificially. Fig. 99. Urate of soda and films of triple phosphate, formed on the surface of concentrated urine. Fig. 100. Urate of ammonia prepared artificially. Fig. 101. Spherules of urate of soda with crystals of uric acid. From a case of long-continued remittent fever. Fig. 102. Urate of ammonia prepared artificially. Fig. 103. Urate of ammonia prepared artificially, p. 352.

Plate XIX. Fig. 104. Urate of soda in spherical masses from various parts of the circumference of which minute acicular crystals of uric acid project. Fig. 105. Urate of soda in a globular form, commonly found in the urine of children. Fig. 106. Crystals of ammoniaco-magnesian phosphate with mucus and mucous corpuscles. Fig. 107. Prismatic crystals of triple phosphate showing their form. Fig. 108. Triple or ammoniaco-magnesian phosphate from acid urine. Fig. 109. Urate of soda prepared artificially. Fig. 110. Rare form of urate of soda, from the urine of a patient suffering from peritonitis, p. 354.

Plate XX. Fig. 111. Beautiful crystals of triple or ammoniaco-magnesian phosphate and spherules of urate of soda. Fig. 112. Crystals of triple phosphate in the form of triangular prisms with obliquely truncated extremities as they frequently occur in urine, p. 356.

Plate XXI. Fig. 113. Crystals of triple phosphate formed by the addition of ammonia to urine. Fig. 114. Crystals of phosphate of lime occasionally met with in urine. Fig. 115. Drawing of a urinary deposit consisting of crystals of phosphate of lime and numerous octahedra of oxalate of lime, with mucus. Fig. 116. Phosphate of lime in the form of dumb-bells, from the mucus of the gall bladder. Fig. 117. Unusual form of triple phosphate. From the urine of a patient suffering from indigestion in the very hot weather. Fig. 118. Large dumb-bells of phosphate of lime, p. 358.

Plate XXII. Fig. 119. Phosphate of lime crystallised in the form of fan-like plates. Fig. 120. Two forms of phosphate of lime mounted in Canada balsam. Fig. 121. Crystals of triple phosphate and phosphate of lime. Fig. 122. Phosphate of lime from urine. Fig. 123. Phosphate and oxalate of lime from the urine of a young man enjoying good health, but taking little exercise. Fig. 124. Deposit from the urine of a man suffering from gouty kidney, consisting of a peculiar form of phosphate of lime with granular and oil casts, p. 360.

Plate XXIII. Fig. 125. Pus corpuscles exhibiting very active movements. From the bladder of a case of chronic inflammation, showing alteration in form due to vital (?) movements. Fig. 126. Pus corpuscles from urine. Fig. 127. Pus corpuscles which have been acted upon by acetic acid. Fig. 128. Pus corpuscles under the action of acetic acid: *a*, action commencing; *b*, complete. Fig. 129. Pus corpuscles showing protuberances. Fig. 130. Formation of pus from germinal matter of epithelium. Fig. 131. Growth and multiplication of pus corpuscles. Fig. 132. Multiplication of pus corpuscles, p. 364.

Plate XXIV. Fig. 133. Groups of crystals of uric acid, often termed "Cayenne pepper" grains, with octahedra of oxalate of lime. Fig. 134. Masses of small uric acid crystals. Fig. 135. Beautiful aggregations of uric acid, p. 384.

Plate XXV. Fig. 136. Large fiddle-shaped plates of uric acid. Fig. 137. Uric acid from urine. Fig. 138. Curious forms of uric acid from urine. Fig. 139. Large halbert-shaped crystals of uric acid: *a*, "Cayenne pepper" grain. Fig. 140. Minute crystals of uric acid, p. 384.

Plate XXVI. Fig. 141. Curious lamellar crystals of uric acid perfectly colourless. Fig. 142. Lozenge-shaped crystals of uric acid precipitated by the addition of acid to urine. Fig. 143. Crystal of uric acid from urine. Fig. 144. Diamond shaped crystals of uric acid, obtained by adding acid to urine. Fig. 145. Common forms of uric acid crystals. Fig. 146. Rhomboidal and cubical forms of uric acid from urine. Fig. 147. Large crystals of uric acid deposited in urine after standing, p. 384.

Plate XXVII. Fig. 148. Rhomboidal crystals of uric acid. Fig. 149. Curious forms of uric acid deposited in the urine of a case of fatty degeneration of the kidneys. Fig. 150. Large very transparent glomeruli of uric acid from urine. Fig. 151. Round, oval, and spear-headed masses of uric acid deposited from urine. Fig. 152. Hexagonal crystals of uric acid, a form which occurs in urine very rarely, p. 384.

Plate XXVIII. Fig. 153. Perfectly colourless crystals of uric acid resembling cystine. From the urine of an epileptic patient. Fig. 154. Small crystals of uric acid of a rhomboidal form, many of them resembling sections of small cylinders. Fig. 155. *a*, large spherules of urate of soda; *b*, film composed partly of urate of soda and partly of uric acid; *c*, uric acid. From the urine of a case of long-continued bilious and remittent fever. Fig. 156. The spherules of urate of soda (Fig. 155) more highly magnified. Fig. 157. Dumb-bell-like crystals of uric acid, obtained by adding hydrochloric acid to urine. Fig. 158. Crystals of uric acid, partly disintegrated. From a specimen which had been preserved for many years in naphtha and creosote fluid, p. 384.

Plate XXIX. Fig. 159. Curious crystals of uric acid, from urine. Fig. 160. Uric acid crystallised round a hair; also octahedra of oxalate of lime, and penicillium glaucum. From urine of a patient suffering from chronic bronchitis and emphysema. Fig. 161. Very large and symmetrical crystals of uric acid from urine. The form and peculiar markings well shown. Fig. 162. Forms of uric acid produced by rapid crystallisation after the addition of nitric or hydro-

chloric acid to urine. Fig. 163. Small crystals of uric acid massed together so as to form a plate, p. 384.

Plate XXX. Fig. 164. Quadrilateral pyramidal crystals of uric acid, precipitated from urine by nitric acid. Fig. 165. Uric acid, from the urine of a case of fatty degeneration of the kidneys. Fig. 166. Less common forms of uric acid crystals: *a*, Cayenne pepper-like grains; *b*, six-sided crystals; *c*, mass with small uric acid crystals projecting from it; *d*, small pyramidal crystals of uric acid very uncommon; *e*, peculiar forms of uric acid. Fig. 167. Irregularly shaped crystalline plates consisting of uric acid, from urine. Fig. 168. Two forms of uric acid, p. 384.

Plate XXXI. Fig. 169. Dumb-bell and octahedral crystals of oxalate of lime. One very large octahedron is shown at the right hand side of the figure. Fig. 170. Octahedral crystals of oxalate of lime. Fig. 171. Curious prismatic crystal of oxalate of lime. Fig. 172. *a*, *b*, *c*, *d*, *e*, to illustrate the appearance of the same octahedron of oxalate of lime viewed in different positions; *f*, *g*, *h*, the same crystal shown sideways; *i*, the appearance of an octahedron when mounted as a dry object; *k*, unusual form of compound crystal of oxalate of lime. Fig. 173. Dumb-bell crystals and allied forms of oxalate of lime. Circular and oval. Fig. 174. Dumb-bell crystals and allied forms of oxalate of lime. Crystals approximating to the perfect dumb-bell. Fig. 175. Perfect dumb-bell crystals of oxalate of lime which have been subjected to the prolonged action of weak acetic acid, p. 384.

Plate XXXII. Fig. 176. Modified forms of oxalate of lime. From the urine of a man who was poisoned by oxalic acid. Fig. 177. Some of the crystals in fig. 176 more highly magnified. Fig. 178. Beautiful feathery crystals of phosphates of lime and magnesia with collections of octahedra of oxalate of lime the angles of which are rounded. Fig. 179. Small globules and octahedron of oxalate of lime. Fig. 179*. Beautiful crystals of triple phosphate exhibiting peculiar markings resulting from partial solution. Fig. 180. Crystals of triple phosphate the prismatic portion of which is defective, and casts containing oil, p. 384.

Plate XXXIII. Fig. 181. Modified form of triple phosphate or phosphate of lime and triple phosphate. Fig. 181*. Octahedra and dumb-bells of oxalate of lime and curious forms of fungi found in the urine of a young man passing much oxalate of lime. Fig. 182. Collections of dumb-bells firmly adherent to each other. Fig. 183. Minute crystals of oxalate of lime with sporules of fungi resembling blood corpuscles. Fig. 184. Dumb-bells subjected to the prolonged action of acetic acid showing the crystalline material nearly dissolved away. Fig. 185. Perfect dumb-bell crystals from the urine of a child suffering from jaundice. Fig. 186. Dumb-bell crystals of oxalate of lime aggregated together, forming a minute calculus. Fig. 187. Spherical, oval, and dumb-bell crystals, p. 384.

Plate XXXIV. Fig. 188. Crystals of cystine from the urine of an insane patient. Fig. 189. Crystals of cystine. Fig. 190. Clusters of crystals of cystine formed by evaporating a solution of the crystals represented in fig. 188 in ammonia. Fig. 191. Very small six-sided crystals of cystine formed by gently evaporating a solution of the crystals represented in fig. 188 in ammonia. Fig. 192.

Irregularly formed crystals of cystine. Fig. 193. Crystals of carbonate of lime seen by reflected light. Fig. 194. Blood corpuscles : *a*, *b*, *c*, taken from the living body ; *d*, *e*, *f*, from the urine ; *d*, corpuscles smaller than natural ; at *e* their circumference is serrated and ragged, and also at *f*. Fig. 195. Large cells filled with granular matter in the urine of a case of chronic bronchitis. Fig. 196. Crystals of carbonate of lime in Canada balsam, appearance with transmitted light. Fig. 197. Tubercle corpuscles from a tubercle in the lung. Fig. 198. Cells found in the urine of a case of renal dropsy. Fig. 199. Cells found in the urine of a child, age 14, suffering from hæmorrhage. Fatty degeneration, 7 months. Fig. 200. Altered blood, menstrual fluid, p. 383.

Plate XXXV. Fig. 201. Rhomboidal and feathery crystals of hæmatoidin, from a softened clot. Human. Fig. 202. Feathery crystals of hæmatoidin found in the urine a fortnight after slight rupture (?) of one kidney. Human subject. Fig. 203. Cancer cells from the urine in a very bad case of cancer of the uterus. Fig. 204. Cancer cells from a case of cancer of the bladder. Found in the urine. Fig. 205. Cells from the urine of a case of acute rheumatism : *a*, in the natural state ; *b*, treated with acetic acid ; *c*, resembling pus ; *d*, the same treated with acetic acid. The small circular bodies are blood corpuscles. Fig. 206. Blood in the form of irregularly shaped clots from the vagina, p. 394.

ENTOZOA.

Plate I. Fig. 1. Layers of which the wall of an hydatid cyst is composed. Fig. 2. Echinococci from hydatid liver of ox. Fig. 3. Echinococci. Fig. 4. Free hooklets of echinococci. Fig. 5. Hooklet of echinococcus. Fig. 6. Tenia echinococcus. Fig. 7. Diptoloma crenata half the real size. Fig. 8. Ova of bilharzia hæmatobia found in urinary deposit. Fig. 9. An ovum of bilharzia hæmatobia highly magnified. Fig. 10. Ova of bilharzia hæmatobia. Fig. 11. Bilharzia hæmatobia, after Bilharz, p. 402.

URINARY CALCULI.

Plate I. Fig. 1. Large uric acid calculus consisting of concentric layers of uric acid deposited upon a smaller calculus composed of oxalate of lime. Fig. 2. Beautiful example of oxalate of lime calculus, the surface of which is of a pale brown colour, and the tubercles small and delicate. Fig. 3. Mulberry calculus which was of a rich plum colour. Fig. 4. Small prostatic calculi. Fig. 5. Large mulberry calculus two-thirds the real size. Fig. 6. Phosphatic calculus. Fig. 7. Blood calculus from the infundibula of the kidney. Fig. 8. One large and two small blood calculi from the pelvis of the kidney. Fig. 9. Phosphatic calculus, the nucleus composed of a small uric acid calculus. Fig. 10. Small calculi from the kidney. The nuclei composed of soft granular material, probably disintegrated epithelium. Fig. 11. Very small calculi from the follicles of the prostate gland, p. 416.

Plate II. Fig. 12. Small compound oxalate of lime calculus found in the urine of a young man who was passing numerous dumb-bells of

oxalate of lime and crystals of uric acid. Fig. 13. Compound oxalate of lime calculus from the same case as that shown in fig. 12. Fig. 14. Urinary deposit consisting of crystals of triple phosphate, and smooth and irregularly shaped oxalate of lime calculi passed in immense numbers from a gentleman suffering from symptoms of renal calculus. Fig. 15. The same calculi as shown in fig. 14 after being treated with acetic acid. The nuclei and concentric layers of each individual calculus have been rendered beautifully distinct, p. 420.

Plate III. Fig. 1. A calculus which had undergone spontaneous fracture in the bladder. Figs. 2 and 3. Portion of a calculus which had separated before removal. Fig. 4. Another calculus which had undergone spontaneous fracture, p. 434.

STRUCTURE OF THE KIDNEY.

Fig. 1.

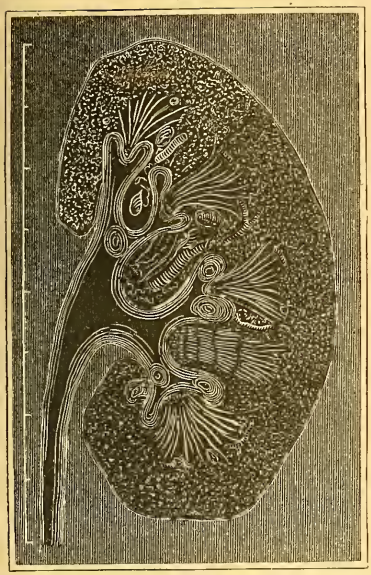
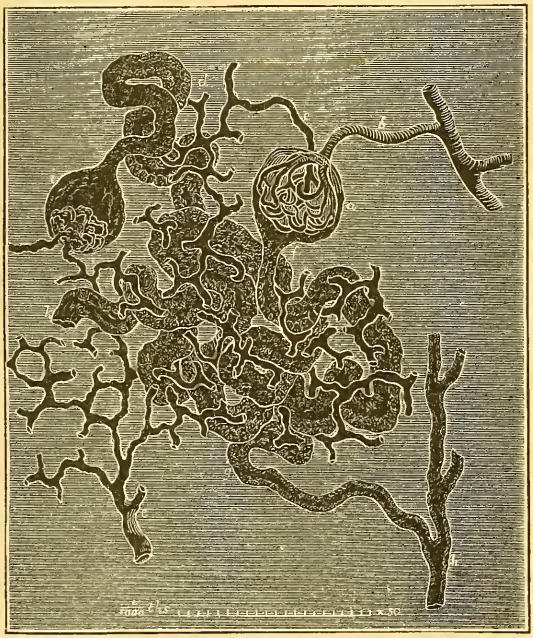


Diagram showing the general anatomy of the human kidney as seen upon section. About two-thirds the natural size. The scale at the side is divided into eight spaces representing half-inches. p. 2.

Fig. 2.

Thin section of a portion of the human kidney *a*, cortical; *b*, medullary portion; *c*, pelvis; *d*, infundibulum; *e* opening of an infundibulum into pelvis; *f*, calyx; *g*, pyramid; *h*, mamilla or papilla; *i* adipose tissue; *k*, large veins divided in making the section. Small arteries are also seen cut across in different parts of the section, some large branches being situated between the cortex and the medullary portion of the organ. p. 3.

Fig. 3.



The secreting portion of the human kidney, showing the uriniferous tube, *k*, commencing in a flask like dilatation, *a*, *i*, which embraces the capillary vessels of the Malpighian tuft; *b* a branch of the artery, afferent vessel, which enters the Malpighian tuft. *c* the vein or efferent vessel. × about 60. p. 5.

[To face page 4.

Plate II.

Fig. 4. Part of the cortex, with the commencement of the medullary portion of the kidney, magnified 15 diameters. *a.* Branches of artery. *b.* Afferent vessels of tuft. *c.* Malpighian tufts. *d.* Efferent vessel of tufts. *e.* Network of capillaries, into which the blood, after having traversed the capillary loops of the tuft, is carried. *f.* Small radicles of renal vein, by which the blood is returned to the large trunks. *g.* Long and almost straight vessels (*vasa recta*), into which the efferent vessel of those tufts situated at the bases of the pyramids, divides. These straight vessels may be traced for some distance towards the apex of the cone. *h.* Veins in the same situation, which return the blood to the large venous trunk, *i.* *k.* Capillary network in the pyramids. *l.* Portion of the capillary network of the cortex, where the meshes are elongated, corresponding to the direct course which many of the uriniferous tubes take, at regular intervals, in the cortex. *m.* Network of other parts of the cortex, in which this arrangement is not observed, *n.* Malpighian bodies not injected. *o.* Convoluted portion of uriniferous tube. *p.* Tubes having a direct course towards the cones, situated at regular intervals through the cortex. At *l* would be situated another parcel, and at *q* a third. The arteries pass in the intervals between these, as represented. *q.* One of the tubes isolated. I have never been able to demonstrate the branches represented, in the human subject, but from their existence in some of the lower animals, it is probable that a similar arrangement may be found in the higher. The branches *r* must therefore be considered merely diagrammatic. *r.* Branches continuous with the convoluted portion. *s.* Wavy portion of uriniferous tube, at the commencement of the cones. *t.* Capsule of kidney. *u.* Uriniferous tube, with Malpighian tuft and capillary vessels complete. *v.* Capillary network, with fragments of uriniferous tubes, from which the epithelium has been washed out (the so-called *matrix* of the kidney).

Fig. 5. Uriniferous tube, with dilated extremity, which embraces the vessels of the Malpighian tuft. The epithelium is seen in the convoluted portion of the tube, but cannot be traced within the capsule in the human subject.

Fig. 6. Small artery, with tuft and capillary network, accurately copied from a specimen. The artery is seen to divide into three or four branches, and each of these gives off capillary loops, which divide and subdivide for some distance before they communicate with those of another division. The letters refer to the same parts as indicated in fig. 1. Every part of fig. 1, with the exception of *q*, *r*, has been copied from actual specimens, prepared from a number of kidneys. The separate drawings thus obtained have been grouped in their proper position, in order to complete the drawing. Fig. 5 is partly copied from nature. Fig. 6 is entirely traced from a preparation. The injection employed for making the specimens was the Prussian blue fluid.*

* "How to work with the Microscope."

[*To face Page* 6.

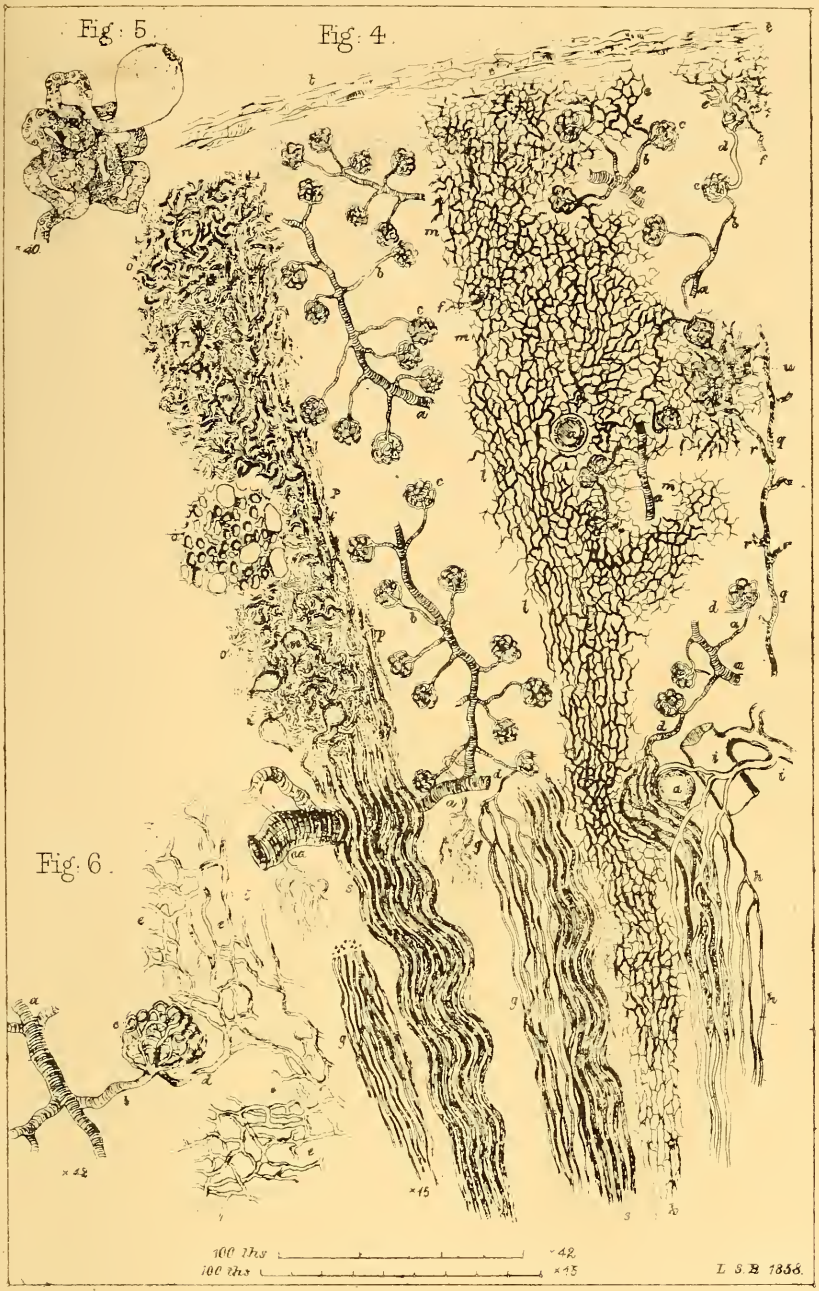


Fig: 5.
Fig: 4.
Fig: 6.
×40
×42
×15
100 ths
100 ths
×42
×15
L. S. & 1856.

Plate III.

EPITHELIUM OF URINIFEROUS TUBE, PELVIS OF THE KIDNEY, URETER, AND URETHRA.

Fig. 7. Convoluted portion of uriniferous tube with epithelium, from the cortical portion of the kidney. *a.* Basement membrane. *b.* Epithelium. *c.* Part of tube from which the epithelium has been squeezed out, leaving only the basement membrane. *d.* Capillary vessels containing transparent injection, showing their relation to the wall of the tube. *e.* Separate cells of epithelium magnified 403 diameters.

Fig. 8. Straight portion of uriniferous tube from the base of a pyramid. *a.* Basement membrane. *b.* Epithelium. *c.* A tube from which the epithelium has been removed. *d.* One of the large straight vessels found among the tubes in the pyramids. *e.* Capillaries also present in this part of the kidney. *f.* Separate epithelial cells magnified 403 diameters.

Fig. 9. Epithelium from the pelvis of the kidney, in part tessellated (*a*) and in part columnar.

Fig. 10. Epithelium scraped from the surface of a pyramid.

Fig. 11. Epithelium from the ureter, entirely columnar.

Fig. 12. Columnar epithelium from the urethra.

The specimens from which all these drawings were copied, were taken from the organs removed from the body of a man, aged 40, who died of pneumonia, otherwise healthy.

The vessels of part of the kidney were injected with Prussian blue fluid,* in order that the relation of the capillaries to the uriniferous tubes might be distinctly made out. The character of the epithelium lining the convoluted portion of the uriniferous tube is represented at *e* (fig. 7). Generally, the cell does not exhibit a distinct outline as is usually represented, although, on the contrary, the outline of the nucleus is often sharp and well defined. The material around the nucleus usually appears granular, and I am not satisfied as to the existence of a distinct cell-membrane. The nuclei are very large, and may easily be mistaken for the entire cell. The epithelium in the straight part of the uriniferous tube in the medullary portion of the kidney is flatter, and its outline is more distinct. In the cortex, the epithelium takes part in *secretion*, but in the medullary portion of the organ it probably corresponds to the epithelium of the *ducts* of glands generally. Many vessels in this part of the kidney pursue a very straight course, and are of large size, their diameter being equal to, or even greater than, that of the tubes, *d* (fig. 8).

* For the composition of this fluid, *see* "How to work with the Microscope."

[*To follow Plate II.*

Fig: 7.

Fig: 8.

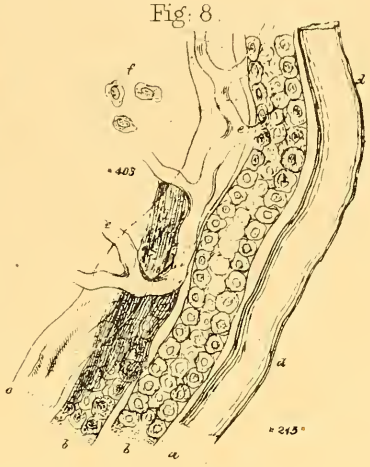


Fig: 9.

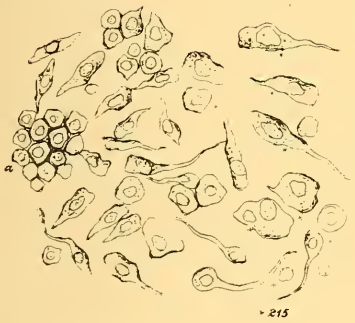


Fig: 10.

Fig: 11.

Fig: 12.

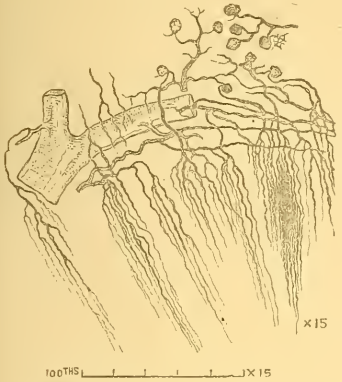
magnified 403

1000 ths × 403
1000 ths × 215

Path. Lab. 1858

STRUCTURE OF THE KIDNEY.

Fig. 13.

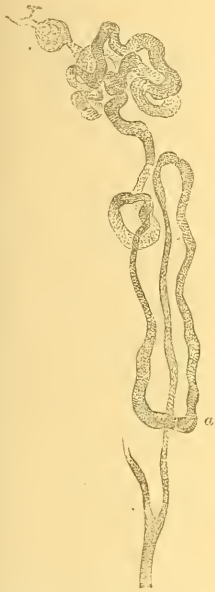


Vasa recta in the pyramidal portion, and Malpighian bodies in the cortical portion. At about the point of union between cortical and straight portions of kidney. p. 7

Fig. 14.

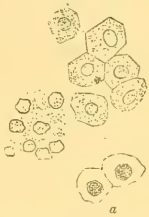
Capillary vessels from Malpighian tuft of human kidney, showing the nuclei connected with their walls. *a* a few coils separated from the rest of the tuft. *b*, part of a loop somewhat compressed, showing the nuclei a little flattened. *c*, tissue which connects the coils with each other, by which the globular form of the tuft is preserved even when it is removed. *d*, a small portion of a capillary compressed as much as possible, showing thickness of capillary wall at the point of reduplication. p. 8.

Fig. 15A.



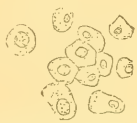
Uriniferous tube bent upon itself at *a* in the pyramid of the kidney. The looped tube of Henle. p. 10.

Fig. 16.



Epithelium from a uriniferous tube. Human kidney. *a*, treated with acetic acid. p. 13. × 215.

Fig. 17.

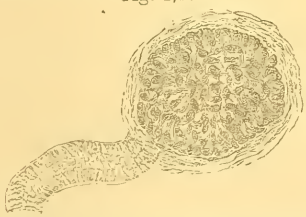


Epithelium from the pelvis of the healthy human kidney. p. 14. × 215.

Fig. 15.

Thin section of healthy human kidney, slightly washed in water. *a*, convoluted portion of uriniferous tube. *b*, portion of a tube stripped of its epithelium. *c*, outline of tube and crumpled capillaries, having a fibrous appearance—the so-called matrix. *d*, very small Malpighian body; loops of vessels shrunk, showing cells in their walls. × 215. pp. 18, 20.

Fig. 17A.



Young and growing Malpighian body of a child, age 2½ years. The muscular fibre cells are seen on the small artery quite close to the Malpighian body. × 215.

Fig. 18.

Epithelium from the ureter. p. 14. × 215.

[To face page 12.

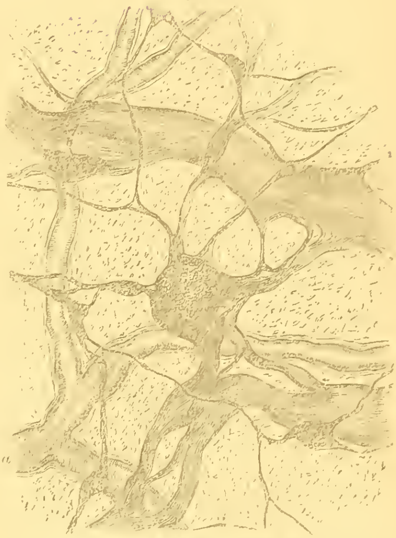
Fig. 19.

A part of the convoluted portion of a uriniferous tube from the newt's kidney, showing capillary vessels and nerve fibres, and the thickened basement membrane continuous in structure with the connective tissue. × 215. pp. 18, 19.

Fig. [illegible].

Malpighian body and tube of the newt's kidney. × 150. pp. 18, 19.

Fig. 20.



Ganglia. Hilus of kidney. [illegible] *a*, a small artery. × [illegible] p. 15.

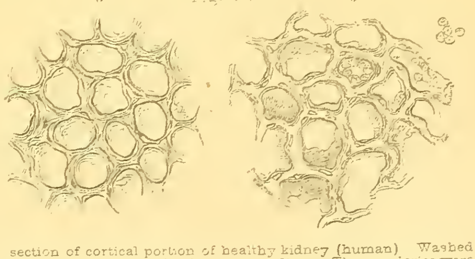
Fig. 21.

Ganglion from the pelvis of the kidney of a boy 3 years of age, showing small arteries and capillaries, nerve cells and bundles of nerve fibres. × [illegible]. p. [illegible].

Fig. [illegible].

Delicate nerve fibres entering into the formation of the bundles connected with the ganglia of the kidney, showing their arrangement and their nuclei. × 700. p. 15.

a Fig. [illegible]. *b*



a section of cortical portion of healthy kidney (human). Washed in water and examined in the same medium. The capillaries were not injected, and having collapsed and shrunk exhibit the fibrous appearance which is considered to depend upon the matrix. *b*, section of another part, in which the vessels were injected. The nuclei on their coats are seen but no "fibrous matrix." × 100. p. 20.

STRUCTURE OF THE KIDNEY.

Plate VI.

Fig. 24. Section of the cortical portion of a human kidney, the vessels of which have been injected with the Prussian blue solution. *a*. Membrane of the tubes. The *a* to the right of the figure shows the position of a Malpighian body: *b* a portion of a capillary loop of a Malpighian body: *c* venous capillaries lying between the uriniferous tubes. In many places the double shaded line indicates the basement membrane of the tubes: *d* position of the uriniferous tubes.

Fig. 25. Transverse section at the base of a pyramid.

Fig. 26. A similar section a short distance lower down, showing sections of the uriniferous tubes. The small tubes join the larger ones at a point lower than that at which the section is made.

Fig. 27. Section nearer the apex of the pyramid.

Fig. 28. Apex of a pyramid showing the manner in which the uriniferous tubes open into the pelvis of the kidney.

[*To follow Plate V.*

Fig. 24.

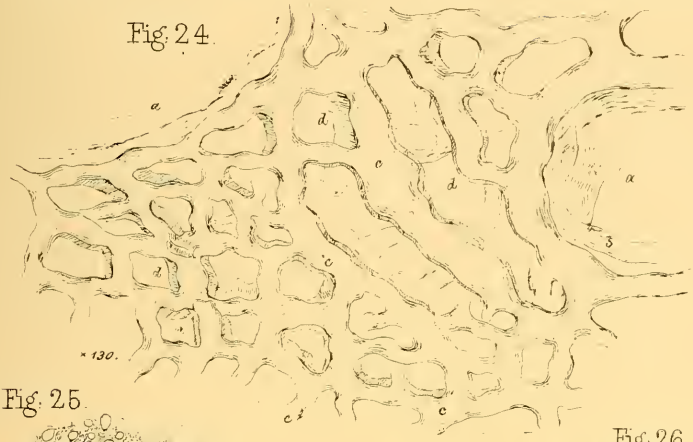


Fig. 25.

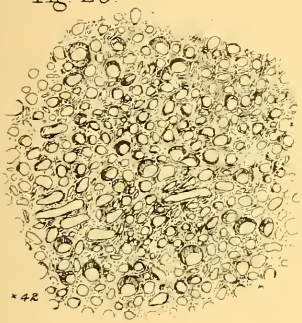


Fig. 26.

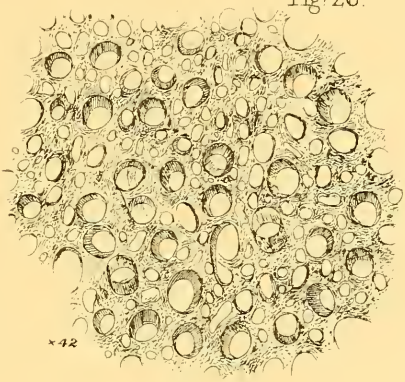
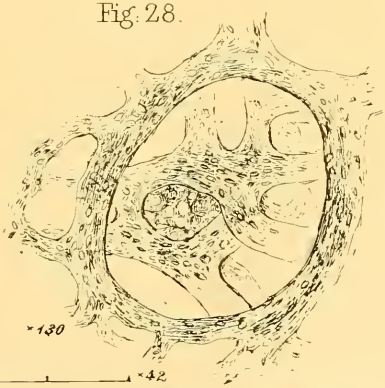


Fig. 27.

Fig. 28.



100 ths ×42

1000 ths ×130

L.S.B.

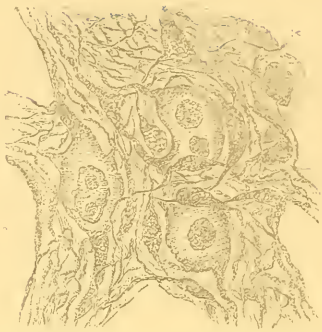
Path. Lab 165c

STRUCTURE OF THE KIDNEY.

Fig. 29.

Uriniferous tubes, some of which are choked with a deposit consisting of albuminous matter and blood. × 29. p 12.

Fig. 33.



A small portion of the small ganglion represented in Fig 21, Plate V., but magnified 700 diameters, showing ganglion cells and their connexion with the nerve fibres. p. 16.

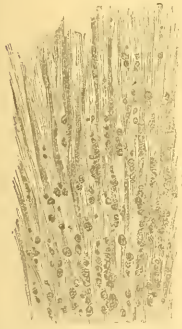
Fig. 34.

Tubes of human kidney. With earthy phosphates precipitated amongst the cells. × 215. p. 12.

Fig. 30.

Transverse section of the tubes of the kidney of a snake, occupied by large crystals of uric acid. × 29. p 12.

Fig. 31.



Crystals of leucine in the substance of kidney. Human subject. × 29. p 12.

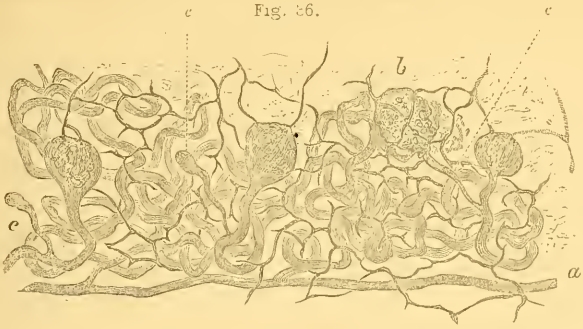
Fig. 32.

Crystals of leucine more highly magnified. From the same specimen. × 215. p. 12.

Fig. 35.

a, portion of uriniferous tube; *b*, capillary vessel; and *c*, nerve fibres. Kidney, child, age 3 × 700. p. 21.

Fig. 36.



Part of the thin portion of the kidney. Female newt. *a*, portion of straight tube continuous with ureter. *b* collection of fatty matter, perhaps a wasted Malpighian body. *cc*, remarkable diverticula connected with tubes just below the Malpighian body. The capillaries are also represented. × 40. p. 28.

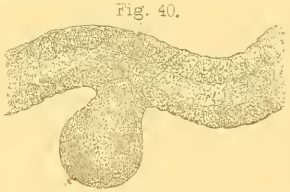
Fig. 37.

Malpighian body and portion of uniniferous tube, with remarkable diverticulum. Female newt. At *a*, a bud projects from the diverticular tube as if a branch were growing from it. × 130. pp. 28, 29.

Fig. 38.

Tube, *a*, containing spermatozoa, from which some Malpighian bodies and uniniferous tubes of the male newt are developed. An old ganglion which has undergone degeneration, and new ganglion cells, are also seen at *b*. × 40. p. 29.

Fig. 40.

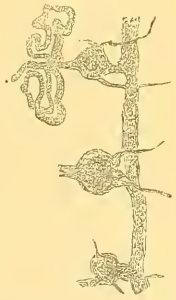


Diverticulum from tube. Kidney, male newt. p. 56.

Fig. 39.

Distribution of nerves and ganglia over thin part of the kidney of male newt. *a* vas deferens; the uniniferous tubes opening into it. *b*, artery. *c*, vein. The numerous ganglia and nerve fibres are seen ramifying over the vessels and tubes. × 20.

Fig. 41.



Tube containing spermatozoa, showing connection with uniniferous tubes and Malpighian bodies. One of the latter is double. Male newt. × 30.

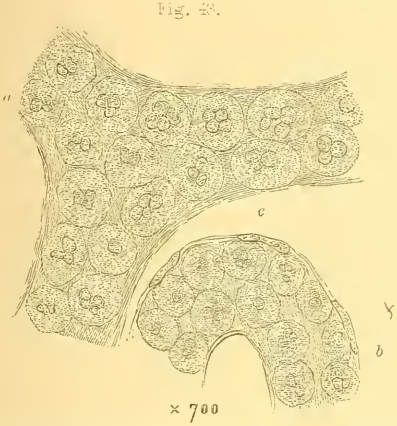
[To face page ...

STRUCTURE OF THE KIDNEY.

Fig. 42.

Tubes of kidney of female newt, part of which has undergone degeneration and wasting. The healthy portion of the tube is seen to the right of the figure. Nerve fibres are also seen in some places. × 215. p. 38.

Fig. 43.



× 700

a, portion of a capillary vessel of the kidney, distended with altered white blood corpuscles. *b*, round flattened cells, from inner surface of capsule of the Malpighian body. *c*, nucleus of capillary wall. Acute suppurative nephritis. p. 45.

Fig. 44.

× 700

Portion of a cast magnified 700 diameters, with cells in the central part resembling white blood corpuscles or pus corpuscles, which have probably multiplied while they were entangled in the coagulable material of the cast. p. 49.

Fig. 45.

Casts containing cells like pus and blood corpuscles. Acute suppurative nephritis. Three days before death. p. 49.

Fig. 46.

Small casts formed in the convoluted portion of the uriniferous tubes, which have become embedded in transparent material during their passage down the straight portion. × 50. p. 49.

(To face page 48.

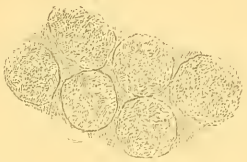
Fig. 47.

...on of a cast, with distinct ...el showing nuclei and gra... ...r contents. Acute nephritis. × 700.

Fig. 48.

Bodies found between the capillaries of the Malpighian body and the walls of the capsule Case of acute suppurative nephritis × 700.

Fig. 49.

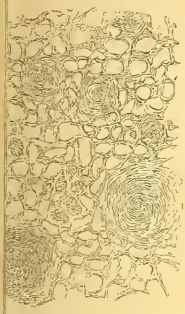


A portion of one of the capillary loops of a Malpighian body, distended with modified white blood corpuscles. × 700.

Fig. 50.

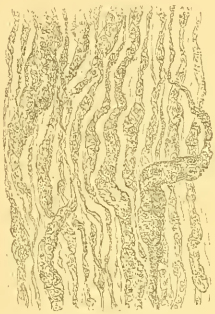
Separate cells found in the urine Case of acute suppurative nephritis. × 700.

Fig. 51.



...lpighian bodies, showing ...ferent degrees of wasting. × 40 p. 50

Fig. 52.



Tubes of the kidney degenerated and wasted. × 215. p. 54.

Fig. 53.

Multiplication of masses of germinal matter about tubes prior to wasting. × 215. p. 43.

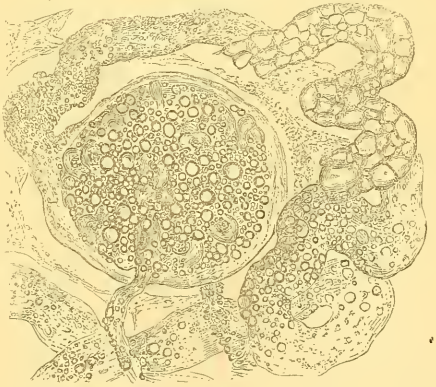
Fig. 55*.

...b-bed crystals of oxalate of lime, impacted in the ...s of a kidney, forming minute calculi. × 215. p. 12

Fig. 54.

...portion of a tube from the cortex of the kidney of ... healthy ... cell, containing much oil. × 215. p. 58.

Fig. 55.



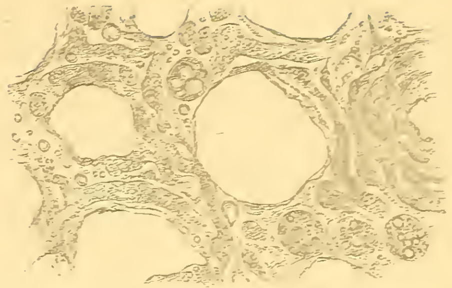
Malpighian body and portions of uriniferous tubes, with capillary vessels containing much oil. From a kidney of a diabetic × 215. p. 60.

[To follow PLATE IX.

Fig. 56.

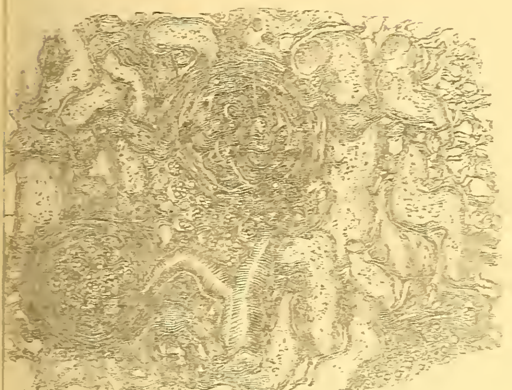
Wasting tube with oil globules in the interior. a tube containing transparent waxy cast with ... matter resulting from altered epithelium. Fatty and contracting kidney.

Fig. 57.



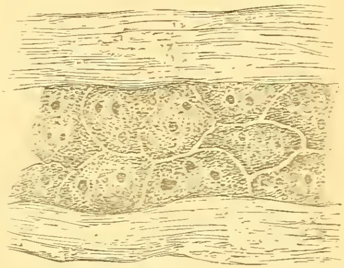
... thin section of the cortex of a fatty and contracting kidney showing the remains of tubes and vessels in what is generally considered as the matrix. a the remains of a tube appearing as connective tissue ... b small artery with thickened walls. × 215. p. ...

Fig. 58.



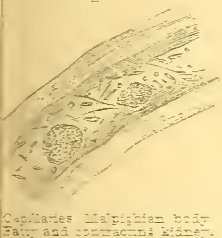
Section of cortex of fatty and contracting kidney. × ... p. 6...

Fig. 59.



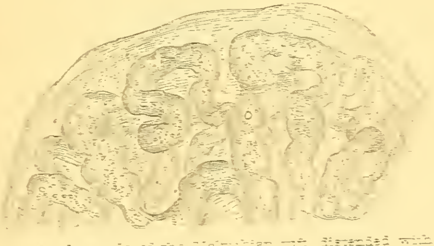
Epithelium of tube much altered. Walls of tube much thickened. × ... Fatty and contracting kidney. p. 66.

Fig. 61.



Capillaries Malpighian body. Fatty and contracting kidney. Bacteria are seen in the interior of the vessel the walls of which are very much thickened. × 700.

Fig. 62.



Loops of vessels of the Malpighian tuft distended with granular matter and containing oil globules. × 215. p. 65.

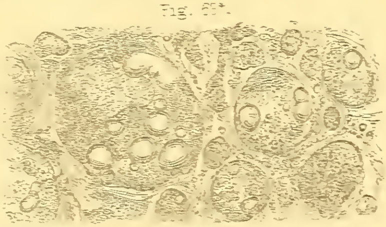
Fig. 63.

Portion of altered tube, with a bud growing from it. Fatty and contracting kidney. × ... p. 68.

Fig. 60.

Portion of very transparent matrix, showing the remains of uriniferous tubes. Fatty and contracting kidney. × ... p. ...

Fig. 63*.

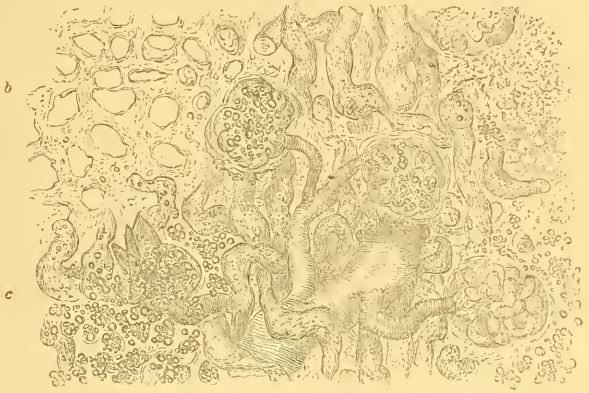


Section of uriniferous tubes in various stages of wasting and degeneration. Fatty and contracting kidney. In some of the tubes there is much oil. × 215.

[To face page 64.

DISEASES OF THE KIDNEY.

Fig. 64.



Section of cortex of a kidney undergoing contraction and fatty degeneration. At *a* the process of wasting is complete. At *b* a portion of the matrix, showing varying size of the tubes. Under the low magnifying power of 40 the wasted tubes and vessels cannot be seen in the specimen. See Figs. 57, 62, Plate XI. At *c* much fatty matter, with crystals, probably of chloresterine. p. 61.

Fig. 65.

Section of an amyloid kidney, showing altered tubes with increased number of altered epithelial cells. A Malpighian body, with amyloid matter deposited in capillary walls, is seen in the centre, and portions of thickened arteries in different parts of the specimen. p. 71. × 130.

Fig. 66.

Capillary vessels, with nerves of capillaries. Skin of Frog. × 215.

Fig. 67.

Small capillary, with nerve fibres, *a*. Healthy human kidney. × 700.

Fig. 69.

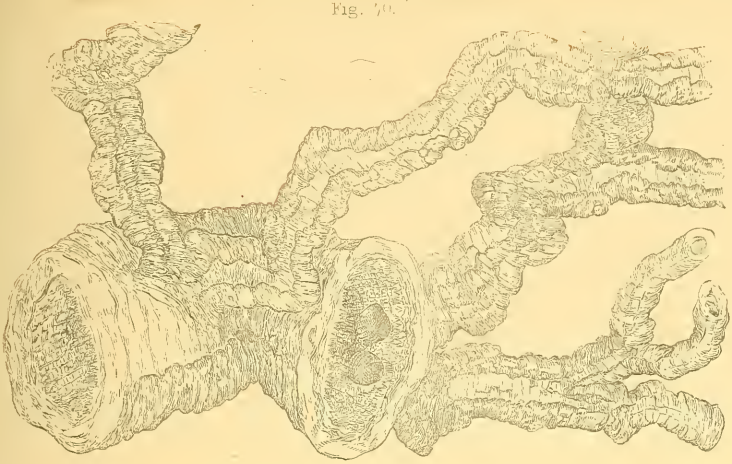
Altered Malpighian body. Fatty and contracted kidney. Capillaries obstructed. Tube of artery, containing altered blood and angular particles of blood colouring matter. × 40.

Fig. 68.

Wasting capillaries from a fatty and contracting kidney. Circulation through these vessels must have ceased some time before the patient's death. × 215.

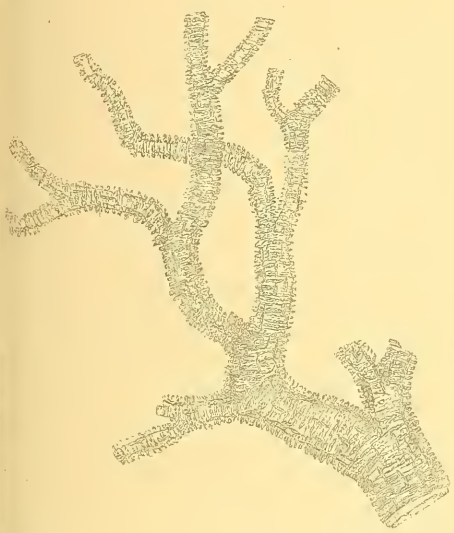
[To face page 70.

Fig. 70.



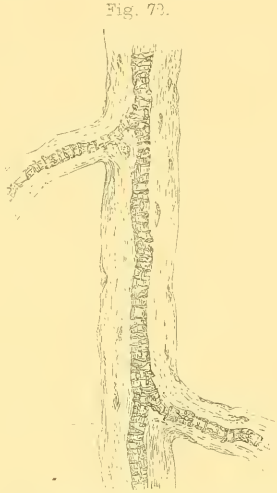
Arteries from a fatty and contracting kidney, showing complete degeneration of muscular fibre cells and the deposition of glistening albuminous material. The walls of the artery have probably long lost all contractile power, and are converted into rigid inelastic tubes, the inner surface of which is uneven, with great irregularity in calibre. × 215. p. 72

Fig. 71.



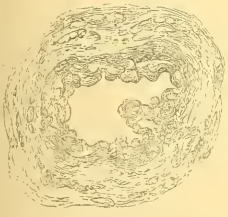
A healthy artery from the kidney of a child, 3 years old, showing muscular fibre cells and longitudinal nuclei of muscular and elastic fibres within. × 215.

Fig. 72.



Artery from the peritoneum of a frog which had been kept for some time without food, showing wasting of muscular fibre cells and great diminution in calibre. In its present wasted and contracted state the external areolar coat is many times the diameter of the vessel. × 215. p. 73

Fig. 73.



A transverse section of a small artery from the same kidney as Fig. 6. × 215. p. 72.

Fig. 74.

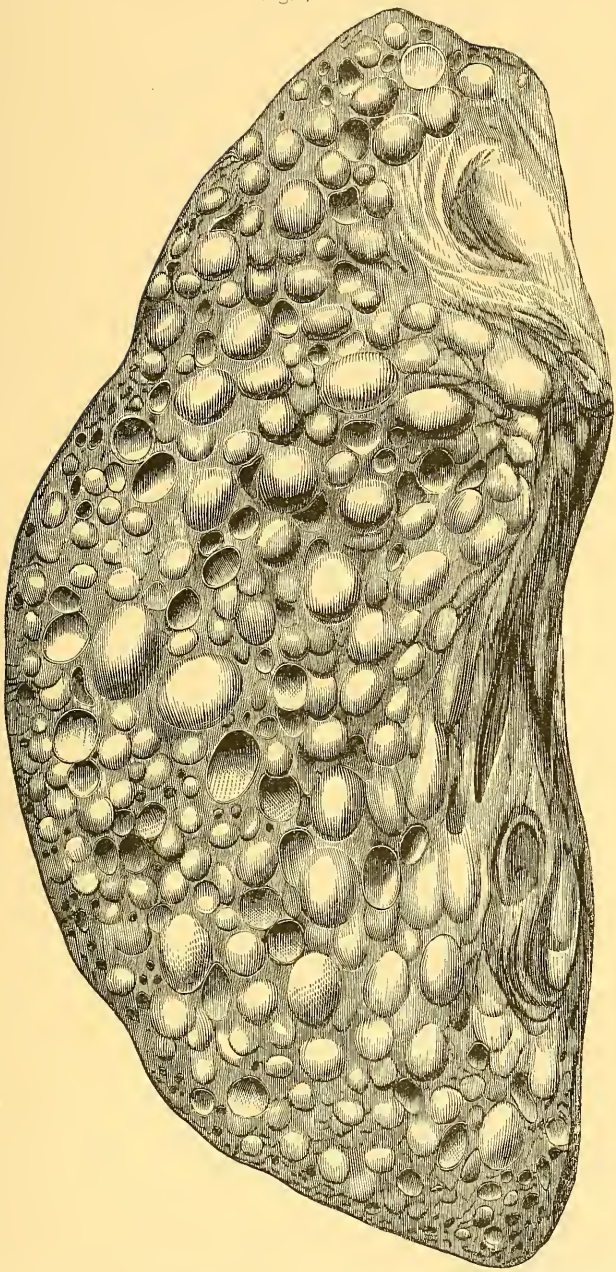
Artery from the same kidney as Figs. 70 and 73, showing great irregularity of calibre and degenerated muscular coat. Oil globules and debris are seen in the interior. × 215. p. 72.

$\frac{1}{1000}$ of an inch |——| × 215.

[To face page 74.

DISEASES OF THE KIDNEY.

Fig. 75.

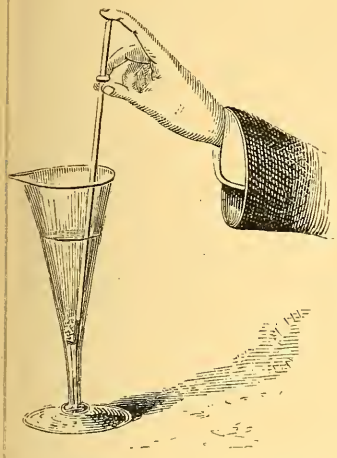


Full-size representation of section of the right kidney, showing the enormous development of cysts throughout its substance. The presence of these growths is evidently due to intra-uterine disease of the fœtus From a drawing by Dr. J. Jardine Murray. p 79

(To face page 80.

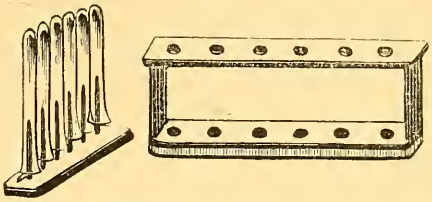
CHEMICAL AND MICROSCOPICAL APPARATUS.

Fig 1.



Conical glass for allowing deposits from fluids to subside. p. 93.

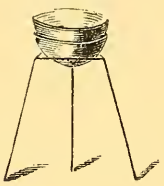
Fig. 2.



Test tubes, rack, and drainer. p. 93.

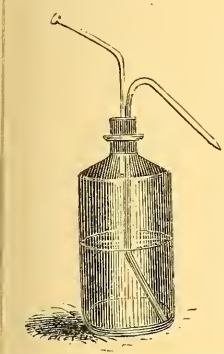
Fig. 3.

Fig. 4.



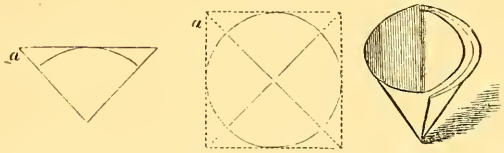
Wire triangles for supporting platinum capsules or foil while the organic matter is being burned off. p. 93

Fig. 5.



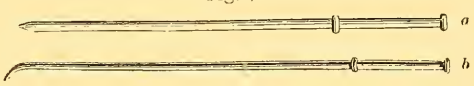
Wash bottle for washing precipitates. &c. p. 93.

Fig. 6



Represents the mode of folding the paper used for filtering purposes p. 93.

Fig. 7.

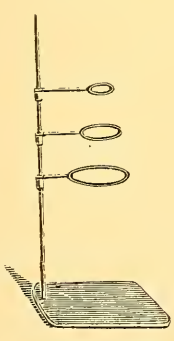


Pipettes. p. 93.

Fig 7*.

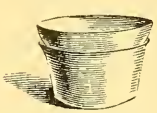
Pipette forming stopper. p. 93.

Fig. 8.



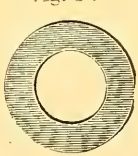
Small retort stand. p. 93.

Fig. 9.



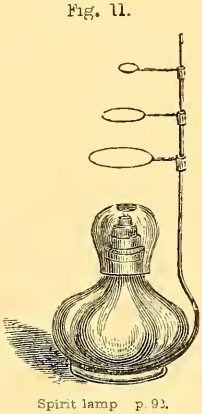
Simple form of water bath.

Fig. 10.



Ring used as an adapter for fitting various sized basins to the simple water bath. p. 93.

Fig. 11.

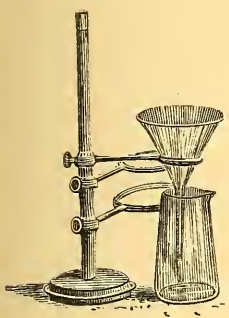


Spirit lamp p. 93.

[To face page 93

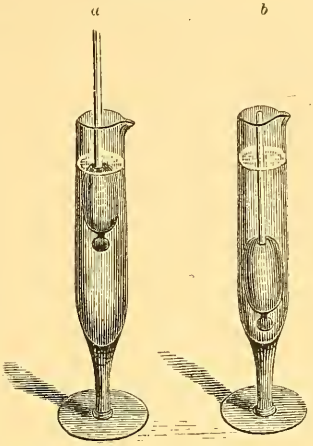
CHEMICAL AND MICROSCOPICAL APPARATUS.

Fig. 12.



Retort stand, funnel, and beaker, arranged for filtering. p. 93.

Fig. 13.

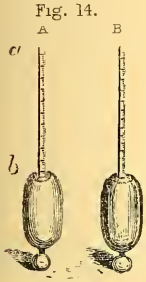


Glasses of convenient form, both for obtaining the specific gravity of fluids and also for collecting the deposits from fluids p. 92.

Fig. 16.

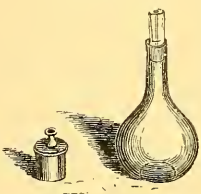
Bottle, with capillary orifice. p. 97.

Fig. 14.



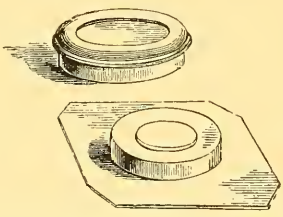
Urinometers for ascertaining the specific gravity of fluids p. 93.

Fig. 15.



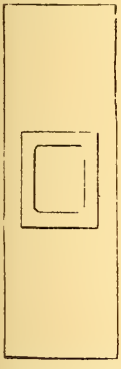
Bottle for finding the specific gravity of fluids by weight. p 93

Fig. 17.



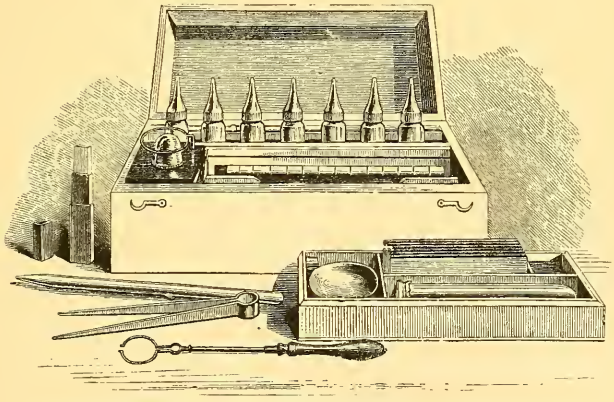
Animalcule cage, also used for examining urinary deposits, &c. under the microscope. p 97.

Fig. 18.



Simple glass cell for examining of urinary deposits. p. 97.

Fig. 19.

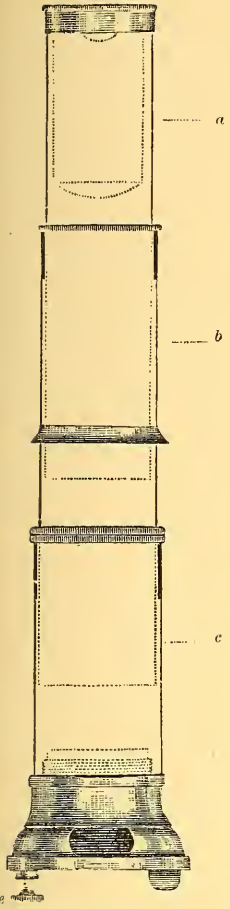


Box containing bottles with capillary orifices, spirit lamp, urinometer and glass, and other appliances and apparatus necessary for minute testing. p. 97.

[To face page 94.

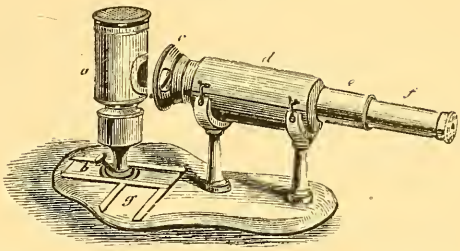
CHEMICAL AND MICROSCOPICAL APPARATUS.

Fig. 20.



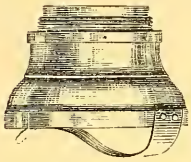
Pocket or clinical microscope, half the real size. *a*, tube with eye piece. *b*, tube carrying object glass. *c*, tube in which the last slides with stage. *e*, clamp for fixing preparation p. 95.

Fig. 21.



Clinical microscope with stand, and lamp, as arranged for class purposes p 95.

Fig 22.

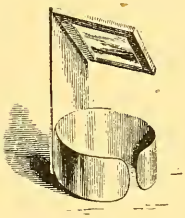


The stage, side view of the clinical microscope, showing position of the spring. p. 95.

Fig. 23.

Sectional view of cell for examining urinary deposits. p 97.

Fig. 24.

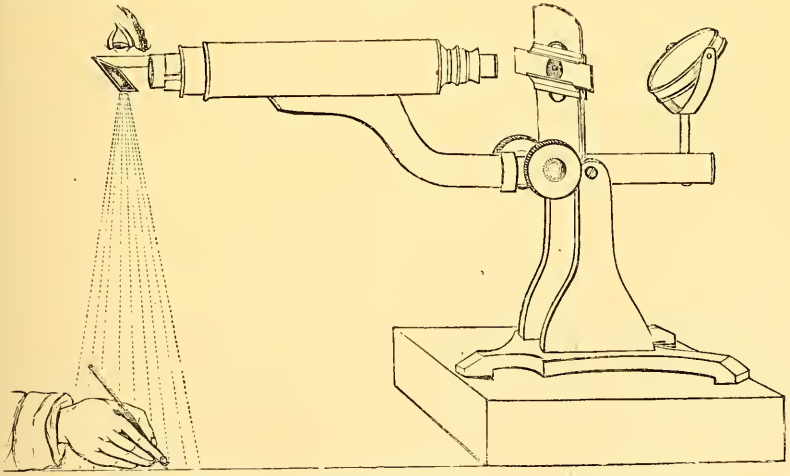


Neutral tint glass reflector. p 97.

Fig. 25.

Scale divided into 1000ths of an inch and magnified 215 diameters. For measuring the size of objects in the microscope. p. 97. × 215.

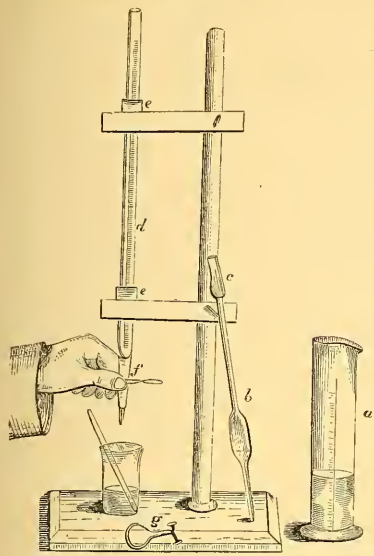
Fig. 26.



Manner of drawing objects from the microscope with the aid of the neutral-tint glass reflector. p. 97.

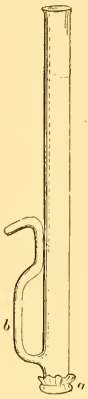
(To face page 96.

Fig. 27.



urette, holding 50 cubic centimetres, and graduated to half c.c., ounted in its stand and arranged as in making analyses. *a*, lass jar capable of holding 500 c.c. *b*, pipette, graduated to old 20 c.c. *c*, india-rubber tube by which the contents of the ipette are caused to flow as required. *d* is the burette. *e*, small ieces of india-rubber for fixing the burette in its place. *f*, india-ubber tube connecting the extremity of the burette with the pout, and capable of being compressed by the spring, the form of which is represented at *g*. p. 102.

Fig. 28.

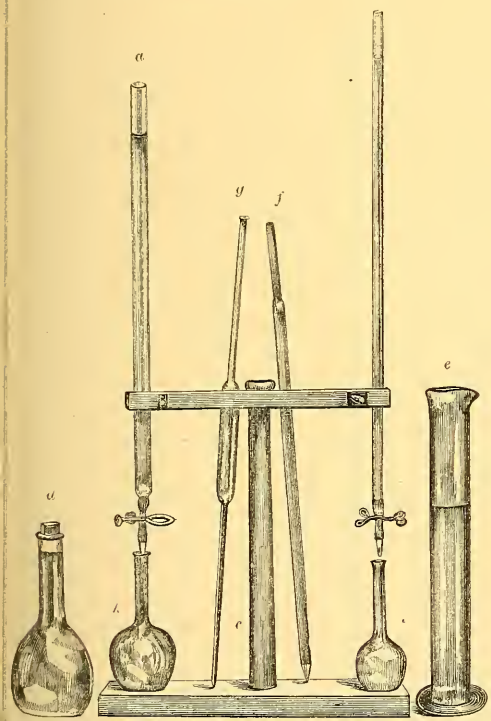


Filter useful in volumetric analyses for obtaining a small quantity of clear solution in order to see if all the substance is precipitated. Filtering paper is tied round the lower extremity, *a*. *b* is the spout through which the clear filtrate is poured. p. 102.

Figs. 30, 31.

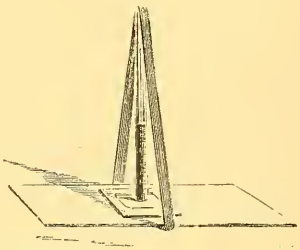
Pipettes of different forms, graduated. p. 103.

Fig. 29.



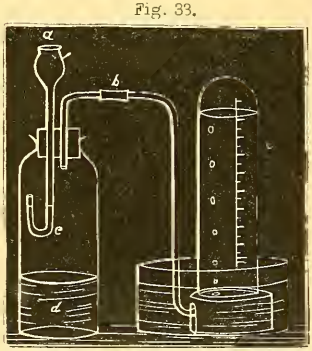
ouble burette stand fitted with burettes graduated to dcm. *a*, 100-dcm. urette. *b*, 30-dcm. burette. *c*, double burette stand. *d*, a 1000-dcm. ask stoppered. *e*, a 1000-dcm. cylinder. *f*, a 50-dcm. whole pipette. *g*, a 50-dcm. graduated pipette. *h*, a 500-dcm. flask. *i*, a 200-dcm. flask. According to Mr. Sutton's directions. p. 104.

Fig. 32.



Arrangement for collecting the deposit from a very small quantity of fluid. p. 284.

Fig. 33.

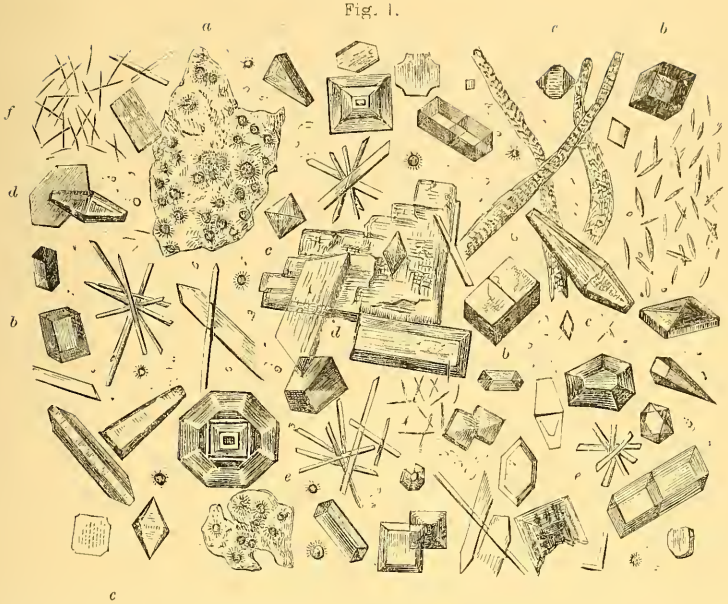


Apparatus as arranged by Dr. Handfield Jones for estimating the proportion of urea in urine. p. 114.

[To face page 104

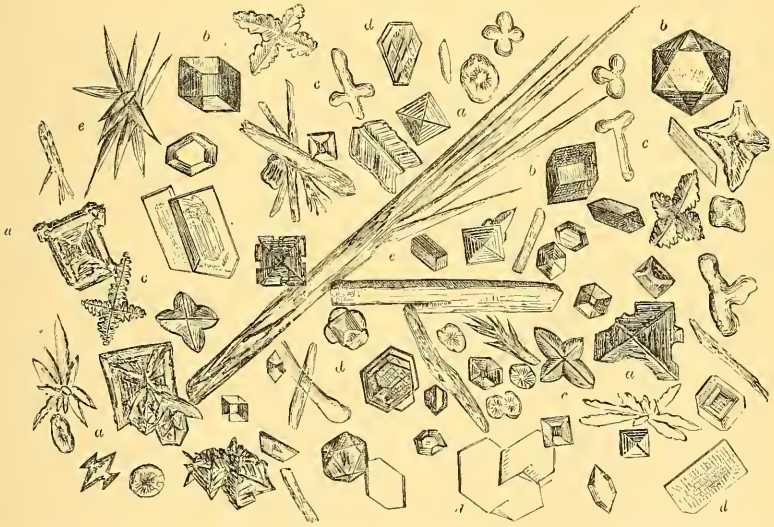
ILLUSTRATIONS OF URINE.

Fig. 1.



Crystalline residue of healthy urine, obtained by concentrating the liquid over a water bath *a*, spherical masses consisting of aggregations of crystals of urate of soda. Many of these are seen deposited upon a film consisting of phosphate of lime and ammoniaco-magnesian phosphate *b*, cubical crystals of chloride of sodium *c*, octahedral crystals of chloride of sodium, which crystallizes in this form in the presence of urea. *d*, large crystals of common phosphate of soda. *e*, sulphates. *f*, urates. × 40. p. 131.

Fig. 2.



Crystals of inorganic salts of healthy urine, obtained by incinerating the dry residue, decarbonizing it, and extracting it with water The solution being concentrated to the proper degree, readily crystallizes. *a*, crystals of common salt, obtained by evaporating the solution nearly to dryness. *b*, crystals of common salt formed in a concentrated solution. *c*, crosslets of common salt obtained by evaporating the solution very rapidly to dryness *d*, crystals of phosphate of soda. *e*, crystals of sulphates. p. 166. × 130.

[To face page 130.

ILLUSTRATIONS OF URINE.

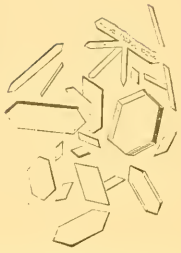
Fig. 3.

Chloride of ammonium.
× 215. p. 130.

Fig. 4.

Crystals of uric acid. × 215. p. 139.

Fig. 5.

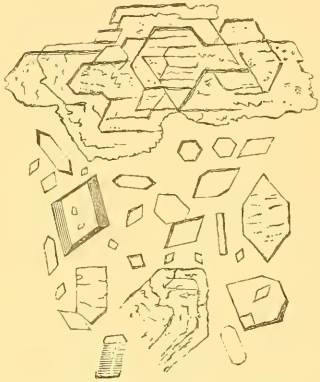


Oxalate of urea, obtained by adding oxalic acid to concentrated urine.
× 215. p. 132.

Fig. 6.

Crystals of indigo, *a* and *b*, obtained by sublimation. *c*, small crystals in fluid. p. 148.

Fig. 7.

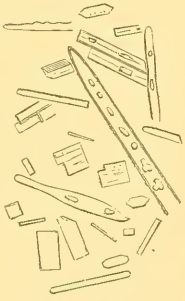


Nitrate of urea. *a*, crystals obtained from urine. *b*, crystals of pure nitrate of urea. × 215. p. 132

Fig. 8.

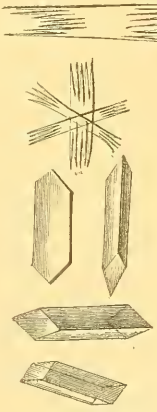
Crystals of uroglaucine from the urine. *a*, small masses of a blue colour. *b*, composed of small spherical particles. *c*, crystals of uroglaucine of a deep purple or violet colour
× 403. p. 148.

Fig. 9.



Urea obtained from urine.
× 215. p. 133.

Fig. 10.



Crystals of hippuric acid
Robin and Verdeil.
p. 142.

[To follow PLATE

ILLUSTRATIONS OF URINE.

Plate II.

Urea, $C_2H_4N_2O_2$.

Fig. 1. Urea obtained from urine crystallized in its own mother liquor.

Fig. 2. The same examined in the dry way.

Fig. 3. Small crystals of urea formed in a concentrated solution of natural urea.

Fig. 4. Similar crystals of larger size.

Fig. 5. Artificial urea crystallized. Examined in the dry way.

Urea.

Pure urea may be easily obtained by the decomposition of the nitrate or oxalate of urea. The crystals represented in fig. 1 were made by decomposing pure oxalate of urea with common chalk. An oxalate of lime is formed, which is separated by filtration, and the urea remains in solution. From the nitrate, urea may be obtained by adding carbonate of baryta — nitrate of baryta and urea result; the latter may be separated by evaporation to dryness, and extraction with alcohol, which dissolves the urea and leaves the nitrate of baryta.

For the mode of preparing the nitrate and oxalate of urea, see page 132. Pure urea may also be obtained artificially by evaporating cyanate of ammonia to dryness.

[*To face Page* 132.

URINE-II

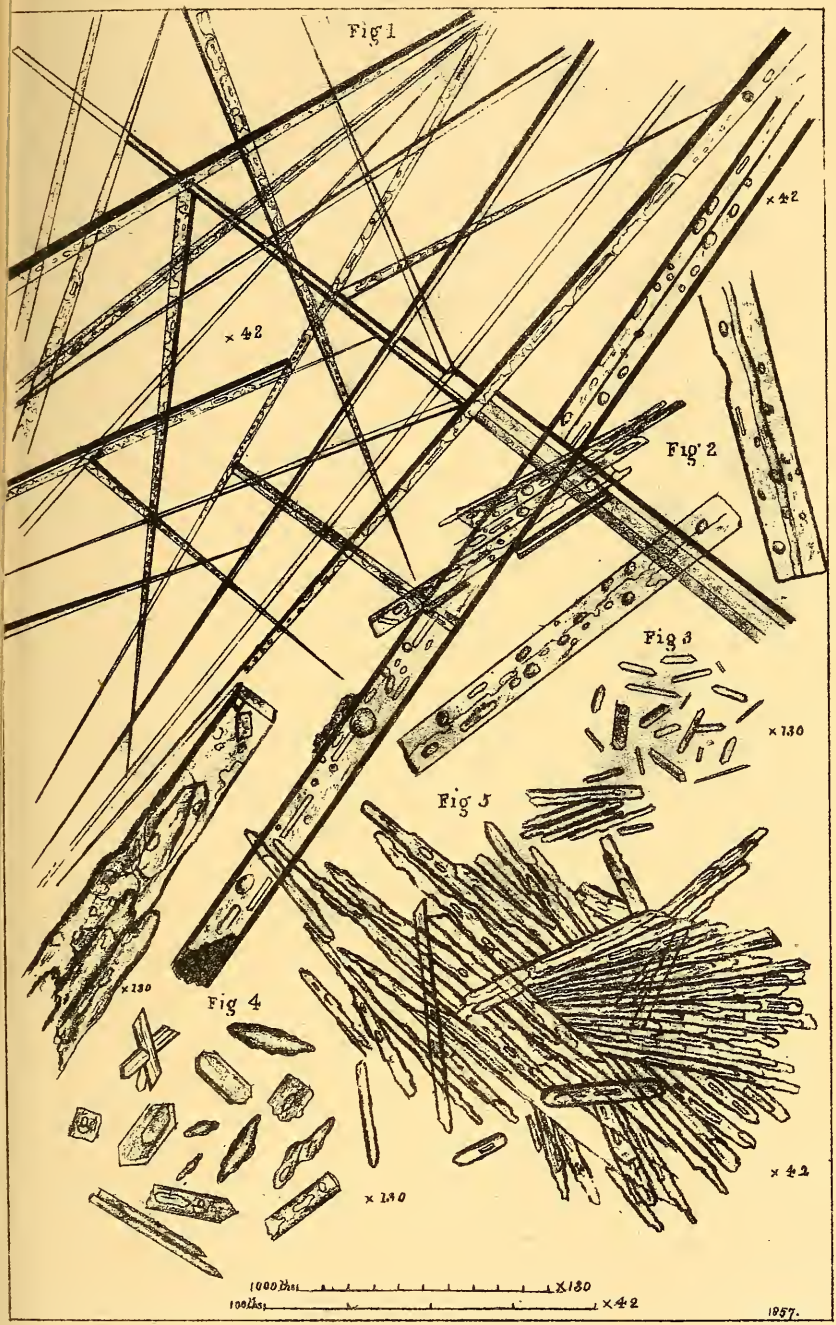
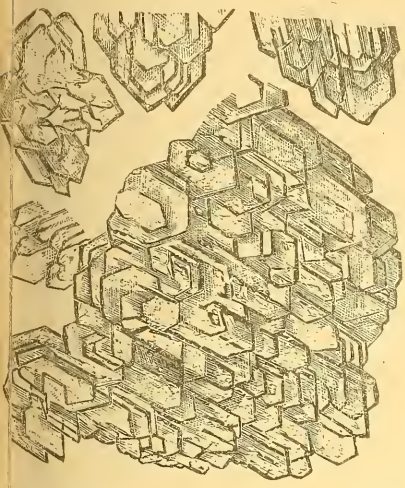


Fig 1
× 42
× 42
Fig 2
Fig 3
× 130
Fig 5
× 130
Fig 4
× 130
× 42
1000 Diam. × 130
100 Diam. × 42
1857.

ILLUSTRATIONS OF URINE.

Fig. 1.

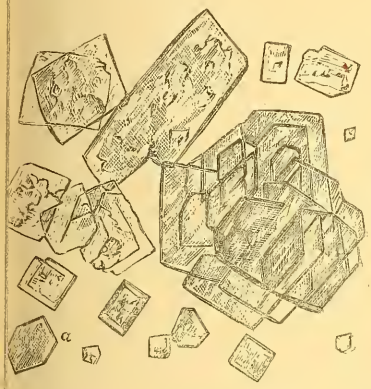


...tals of nitrate of urea ($C_2H_4N_2O_2$, HO, NO_5) formed by adding excess of nitric acid to concentrated urine. × 130. p 133.

Fig. 2.

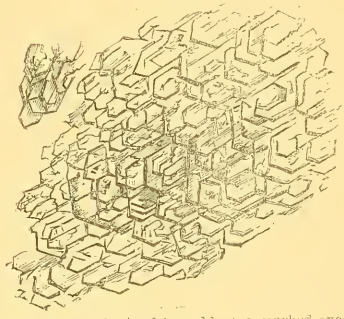
Nitrate of urea formed by adding a quantity of nitric acid not sufficient to combine with the whole of the urea present. × 130. p 133.

Fig. 3.



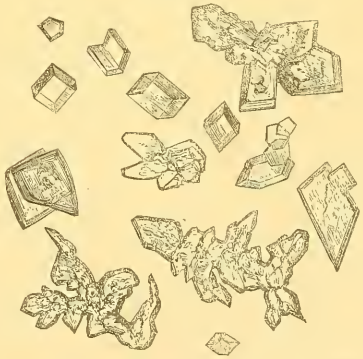
...ate of urea, obtained by adding a moderate quantity of ...ic acid to slightly concentrated urine in a test tube, and allowing it to crystallize slowly. × 130.

Fig. 4.



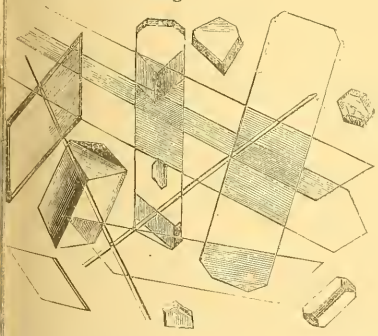
Nitrate of urea obtained by adding a marked excess of nitric acid. × 130.

Fig. 5.



...itrate of urea formed by adding only two drops of nitric acid to highly concentrated urine. × 130.

Fig. 6.



...ystals of pure nitrate of urea, obtained by dissolving ...me of the nitrate in water and evaporating, so that crystals may form. × 130.

[To face page 134.

ILLUSTRATIONS OF URINE.

Plate IV.

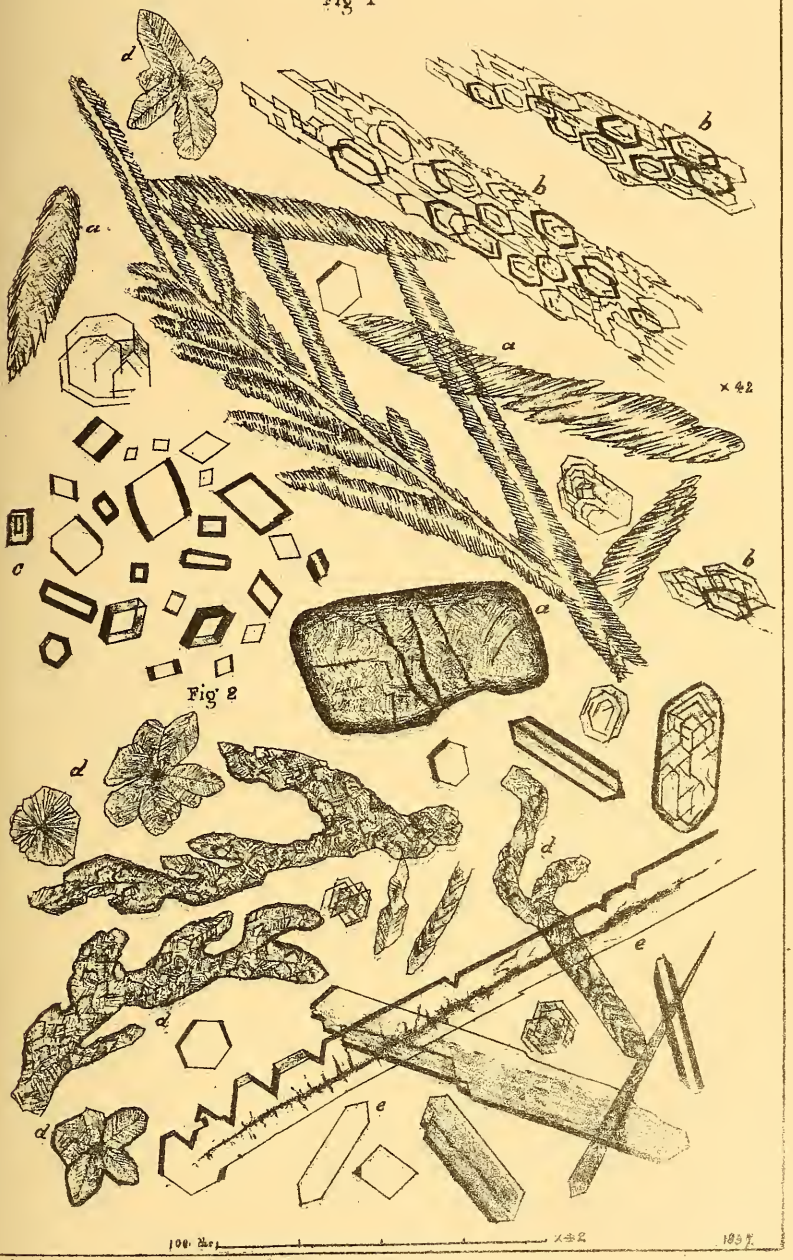
Oxalate of Urea, $C_2H_4N_2O_2$, HO, C_2O_3.

Fig. 1. Crystals of oxalate of urea, obtained by re-crystallizing nearly pure oxalate of urea from an aqueous solution. *a.* Dendritic masses, in which the form of the crystal is not very distinct. *b.* Masses of well formed crystals. *c.* Perfect crystals of oxalate of urea.

Fig. 2. Crystals of oxalate of urea obtained by evaporating healthy urine to dryness, and extracting the residue with alcohol; the alcoholic solution was then evaporated to dryness, and water added until the residue had a syrupy consistence; to this oxalic acid crystals were added in sufficient quantity to form an oxalate with the urea present. *d.* Represents the general character of the crystals of oxalate usually formed in this manner. *e.* More perfect crystals.

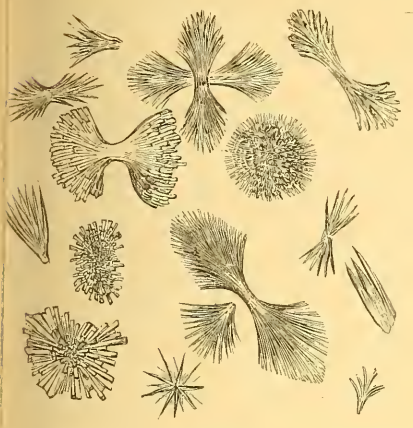
[*To face Page* 136.

URINE - IV.



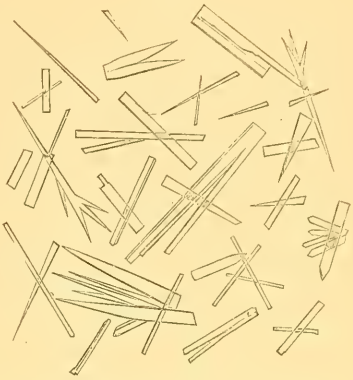
ILLUSTRATIONS OF URINE.

Fig. 1.



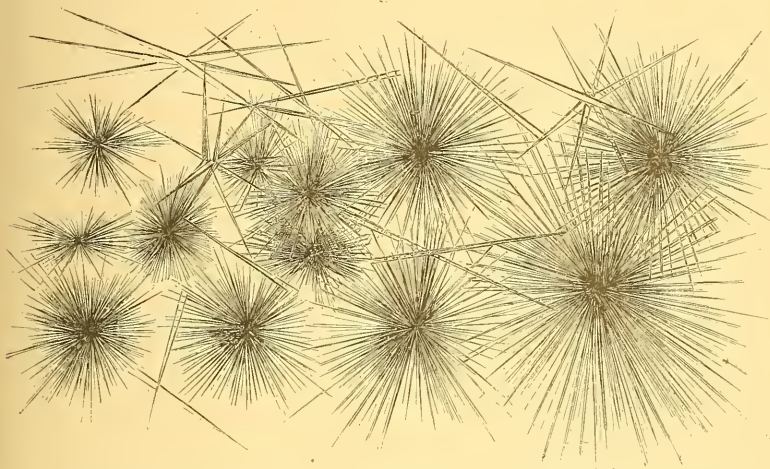
Urate of magnesia. $MgO, C_{10}H_3N_4O_5 + 6$ aq Crystallized in tufts. × 130

Fig. 2.



Urate of magnesia, showing the separate forms of the crystals. × 215.

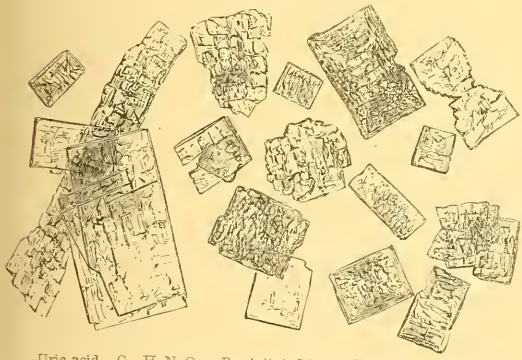
Fig. 3



× 130. × 215.

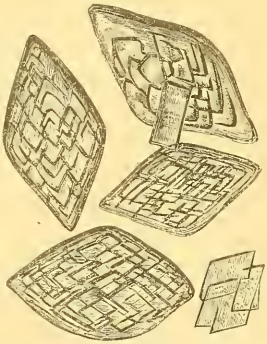
Urate of lime. $CaO\ C_{10}H_3N_4O_5 + 2$ aq. Crystallized in tufts composed of long acicular crystals.

Fig. 4.



Uric acid. $C_{10}H_4N_4O_6$ Precipitated by adding hydrochloric acid to urate of potash. × 130.

Fig. 5.



Uric acid deposited from urine × 130.

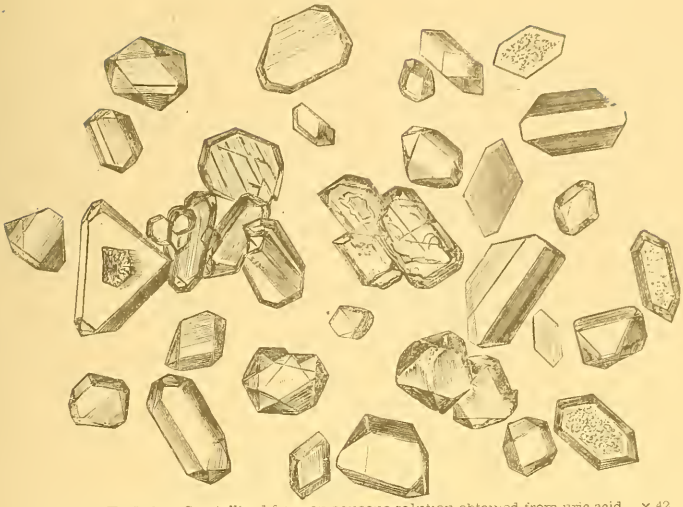
$\frac{1}{1000}$ of an inch |—| × 130.

,, ,, |—| × 215.

[To face page 133.

ILLUSTRATIONS OF URINE.

Fig. 1.

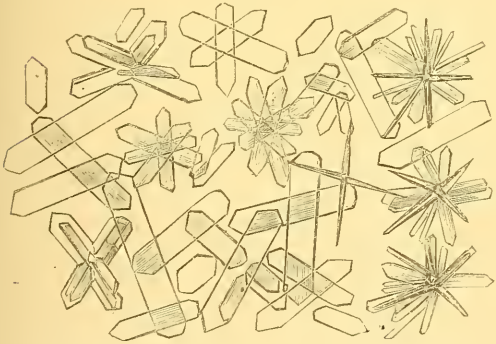


Alloxan. $C_8H_2N_2O_8$. Crystallized from an aqueous solution obtained from uric acid. × 42.

Fig. 2.

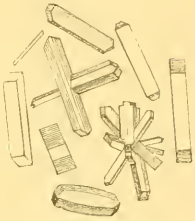
Alloxantin. $C_{16}H_4N_4O_{14} + 6$ aq. Prepared from uric acid. × 130.

Fig. 3.



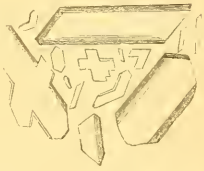
Parabanic acid. $C_6H_2N_2O_6$. Obtained from uric acid. × 130

Fig. 4.



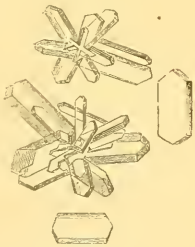
Crystals of creatine. p 138.

Fig. 5.



Crystals of inosite. p. 280.

Fig. 6.



Lactate of copper. p. 153.

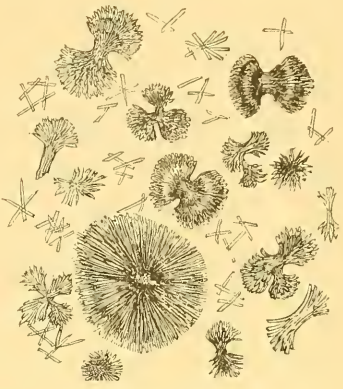
[To face page 140.

ILLUSTRATIONS OF URINE.

Fig. 1.

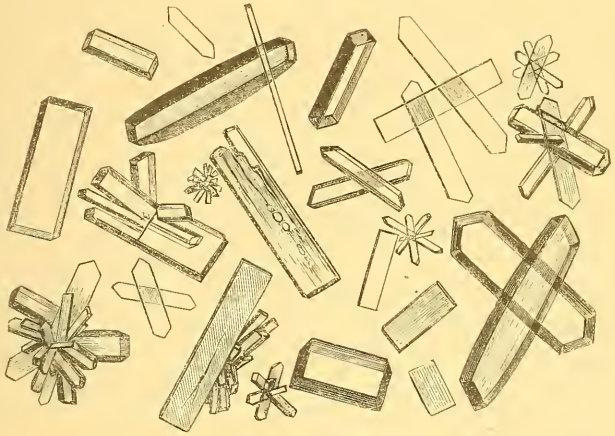
Compound of chloride of zinc and creatinine, as it is obtained from urine. ($C_8H_7N_3O_2$, Zn Cl.) × 29

Fig. 2.



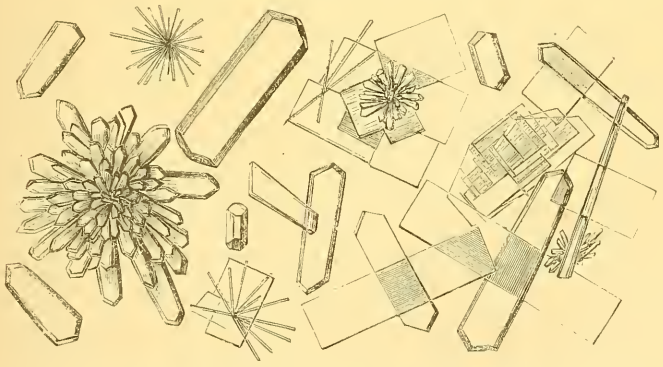
Compound of chloride of zinc and creatinine after re-crystallization in water. × 215. p. 137.

Fig. 3.



Crystals of creatine obtained from the chloride of zinc compound. Crystallized from an aqueous solution. × 130. p. 138.

Fig. 4.



Crystals of creatinine obtained from the chloride of zinc compound. × 130. p. 137.

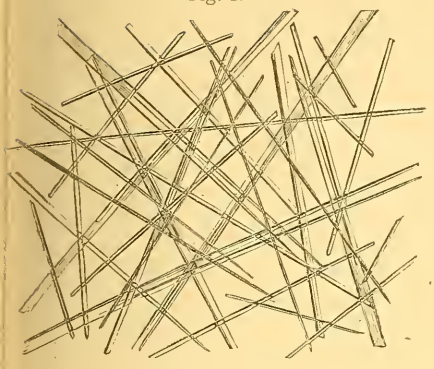
$\frac{1}{100}$ of an inch |—| × 130.

,, ,, |——| × 315.

[To face page 140.

ILLUSTRATIONS OF URINE.

Fig. 1.

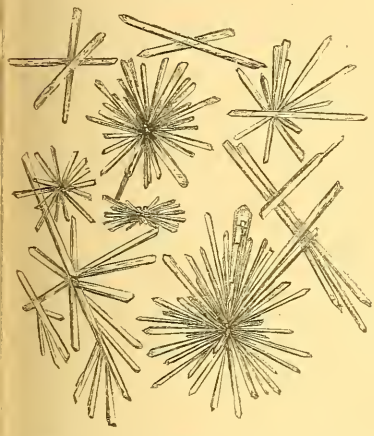


Alloxanic acid. $C_8H_4N_2O_{10}$. × 130.

Fig. 2.

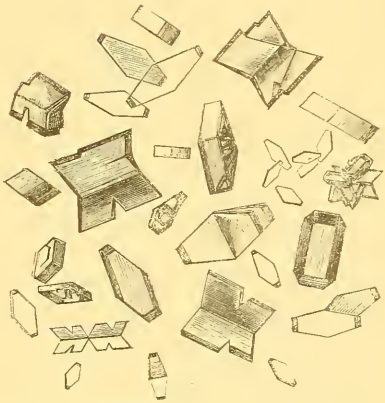
Oxaluric acid. $C_6H_4N_2O_8$. × 42.

Fig. 3.



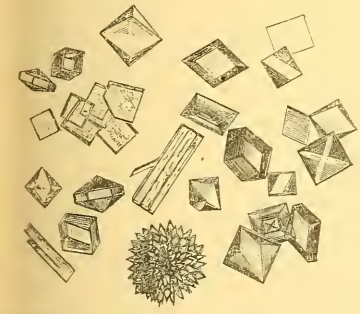
Oxalurate of ammonia. $NH_3, C_6H_4N_2O_8$. × 42. p. 153.

Fig. 4.



Oxalurate of lime. $CaO, C_6H_3N_2O_7 + aq.$ × 42

Fig. 6



Oxalurate of magnesia. $MgO, C_6H_3N_2O_7 + aq.$ × 215

Fig. 5.

Uramile. $C_8H_5N_3O_6$. × 130

(To face page 144)

Plate IX.

Fig. 1. Alloxanic acid, $C_8H_4N_2O_{10}$.

Fig. 2. Oxaluric acid, $C_6H_4N_2O_8$.

Fig. 3. Oxalurate of ammonia, NH_3, $C_6H_4N_2O_8$.

Fig. 4. Murexide, $C_{16}H_8N_6O_{12}$.

Fig. 5. Thionuric acid, $C_8H_5N_3O_8 + 2SO_2$.

Fig. 6. Thionurate of ammonia, $2NH_3$, $C_8H_5N_3O_8$, $2SO_2 + 2$ aq.

The alloxanic acid was prepared by adding baryta water to a solution of alloxan. The alloxanate of baryta so formed was decomposed by sulphuric acid, and the clear solution filtered from the precipitate of sulphate of baryta was evaporated and crystallized.

Oxaluric acid was obtained by treating a solution of oxalurate of ammonia with hydrochloric acid. The oxaluric acid was precipitated.

Oxalurate of ammonia was prepared by dissolving parabanic acid in ammonia. Upon heating the solution to the boiling point oxalurate of ammonia was formed, and crystals were obtained upon evaporation.

Murexid. Carbonate of ammonia was added to a warm solution of alloxan and alloxantin. The murexid separated in its characteristic dark red crystals as the solution cooled.

Thionuric acid. A solution of thionurate of ammonia in hot water, was precipitated by acetate of lead. The precipitate was suspended in water and decomposed by sulphuretted hydrogen. The sulphuret was separated by filtration, and the clear solution yielded crystals on evaporation.

Thionurate of ammonia. A cold strong solution of alloxan was mixed with a solution of sulphurous acid in water until the smell of the latter ceased to disappear after agitation. The fluid was then supersaturated with carbonate of ammonia, and kept boiling for nearly half-an-hour. Upon cooling, the salt crystallized in considerable quantity.

[*To face Page* 146.

Fig. 1.

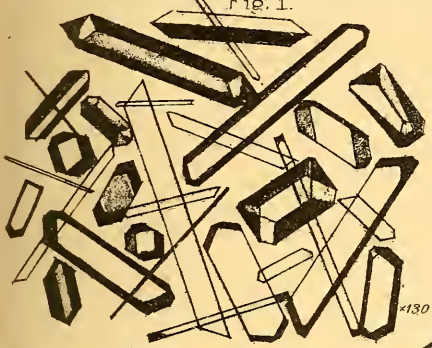


Fig. 2.

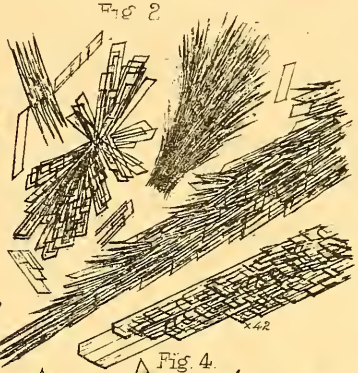


Fig. 3.

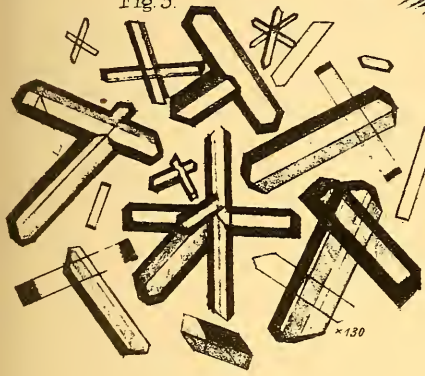


Fig. 4.

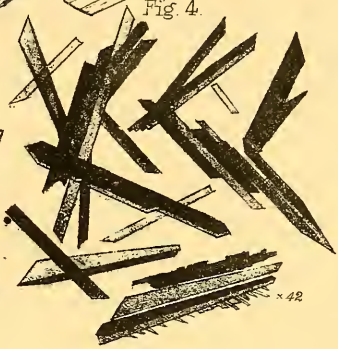


Fig. 5.

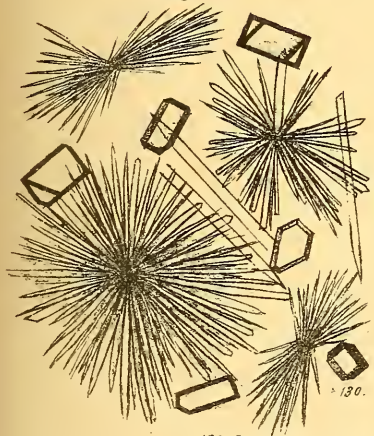
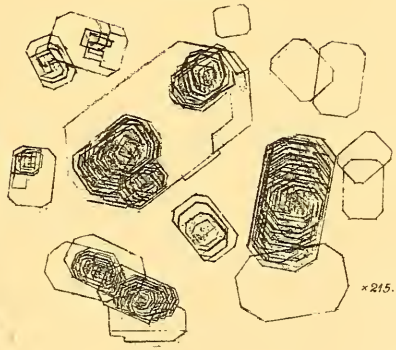


Fig. 6.

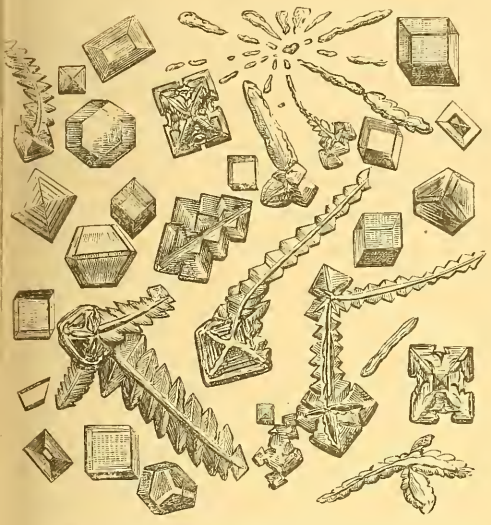


100 Ths. ×42
1000 Ths. ×130
1000 Ths. ×215

18

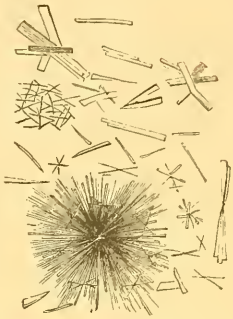
ILLUSTRATIONS OF URINE.

Fig. 1.



Crystals of chloride of sodium, examined in their own mother liquor. × 215. p. 167.

Fig. 2.

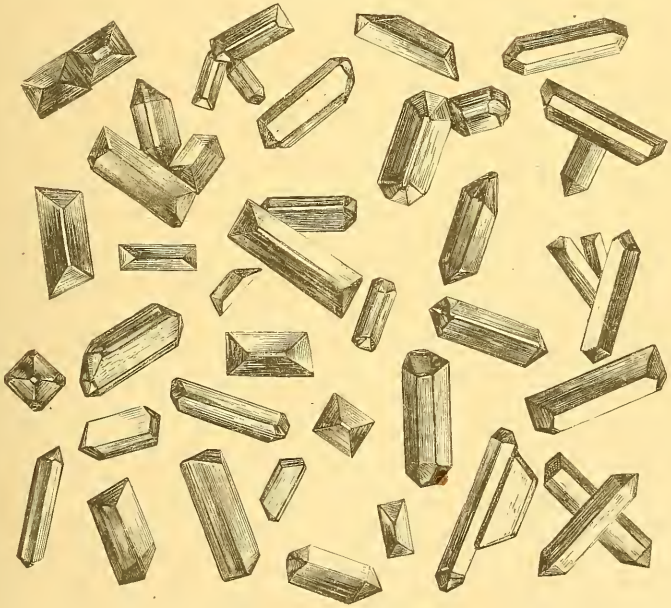


Phosphate of lime in a crystalline form. × 215. p. 163.

Fig. 3.

Phosphate of lime. × 215. p. 163.

Fig. 4.



Crystals of triple phosphate in the form of triangular prisms, with obliquely truncated extremities, as they frequently occur in urine. × 45. p. 164.

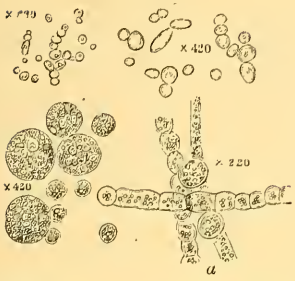
[To face page 160.

ILLUSTRATIONS OF URINE.

Fig. 1.

rification of penicillium glaucum. p. 243.

Fig. 2.

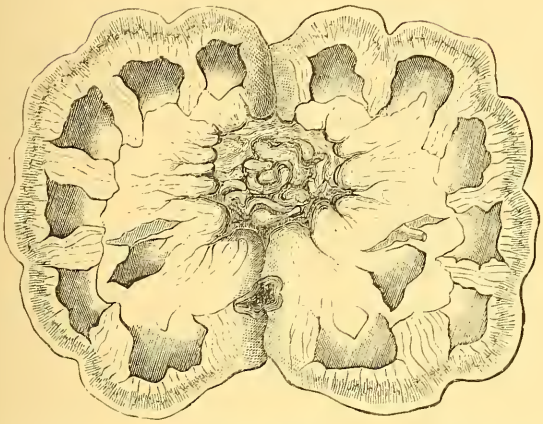


The sugar fungus from diabetic urine. p. 240

Fig. 3.

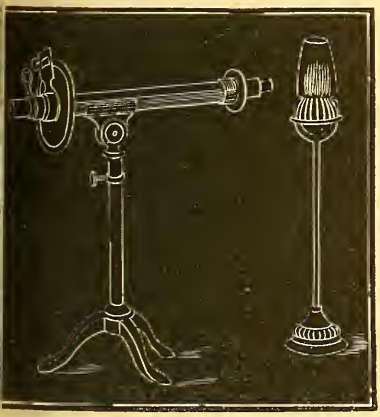
Fructification of yeast fungus. p. 243.

Fig. 4.



Human kidney, showing greatly dilated pelvis and calyces, shrunken pyramids, and diminished cortical portion p. 180.

Fig. 5.



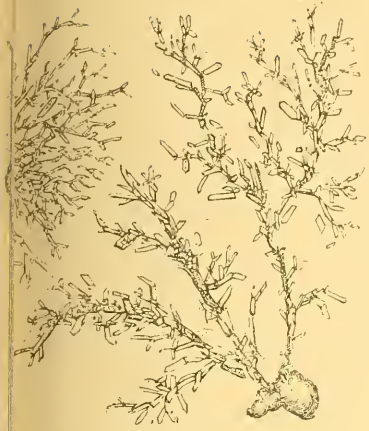
lification of Mitscherlich's polarising saccharimeter for determining the proportion of sugar in fluids. p. 252.

Fig. 6.

Flask adapted for the estimation of carbonic acid gas, used in determining the proportion of sugar in fluids by the fermentation test. p. 253.

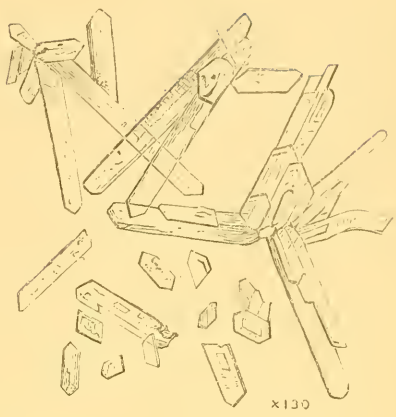
[To face page 252.

Fig. 1.



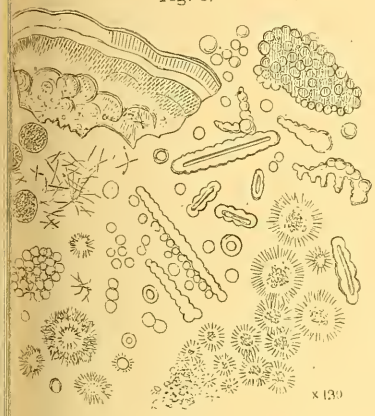
Crystals of diabetic sugar. × 49. p. 242.

Fig. 2.



Separate crystals of diabetic sugar. × 130. p. 242

Fig. 3.

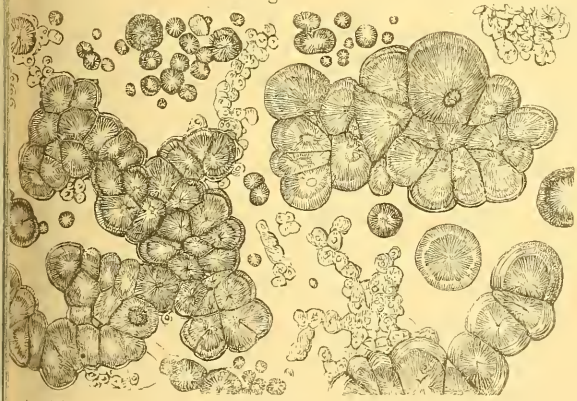


Crystals of leucine from urine. × 130. p. 278.

Fig. 5.

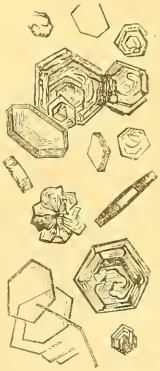
Crystals of tyrosine × 130. p. 279

Fig. 4.



Crystals of leucine from urine of a case of leucocythemia × 215 p. 278

Fig. 6.



Tyrosine from urine × 215 p. 280.

$\frac{1}{1000}$ of an inch └─┘ × 130

,, ,, |___| × 215.

[To face page 280.

URINARY DEPOSITS.—EXTRANEOUS MATTER.

Fig. 1.

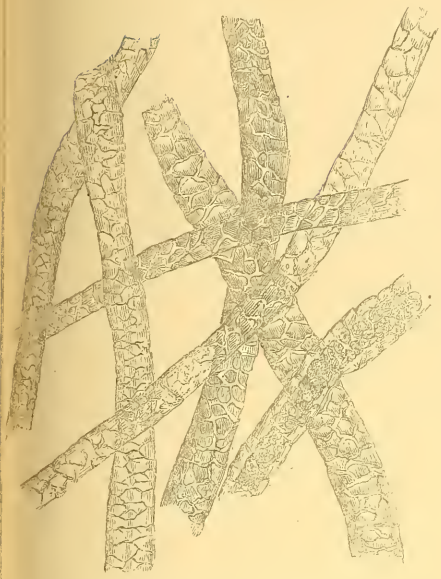
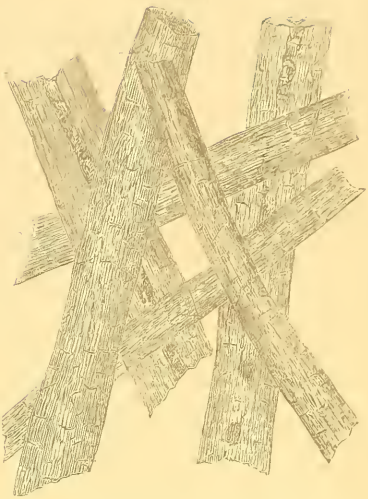
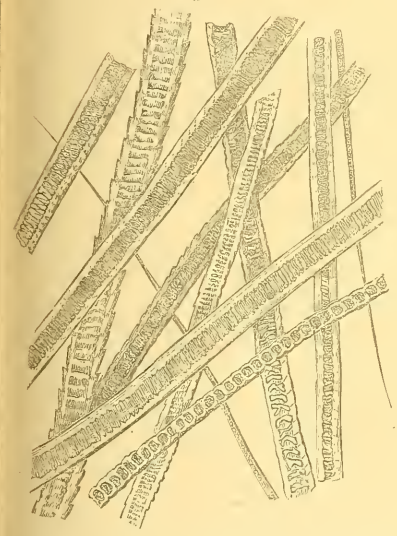


Fig. 2.



Fragments of human hair. In two the central canal is occupied with the soft cells of the medulla is represented. × 130. p. 291.

Fig. 3.



Fragments of cat's hair. Some of them near the apex and others close to the root of the hair. × 130. p. 294.

Fig. 4.

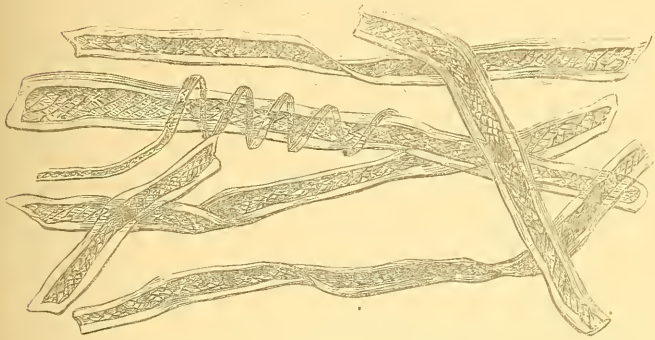
Fibres of silk. *a*, white silk; *b*, black silk. × 215. p. 295.

Fig. 5.

Scales of moth. × 215. p. 29[illegible]

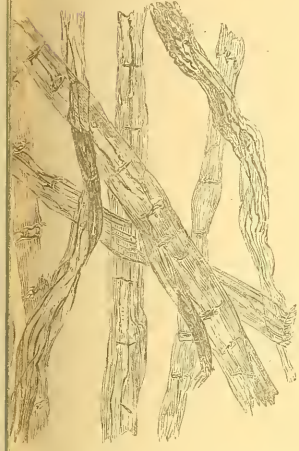
URINARY DEPOSITS.—EXTRANEOUS MATTERS.

Fig. 6.



Cotton fibres. A very small fibre in the upper part of the figure is seen to be twisted round a larger one. × 215. p. 294.

Fig. 7.

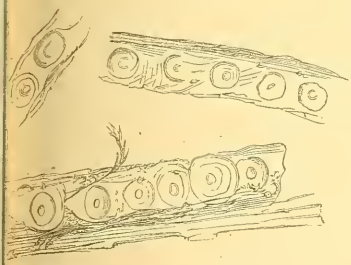


Portions of flax fibres. × 215. p. 294.

Fig. 8.

Portions of feathers. The knotted pieces represented are obtained from the lower part of the shaft of the feather. × 215. p. 294.

Fig. 9.



Fibres of deal wood swept from the floor. × 215. p. 295.

Fig. 10.

Elements of dust swept from a shelf. × 215. p. 295.

1/100 of an inch [ ] × 215.

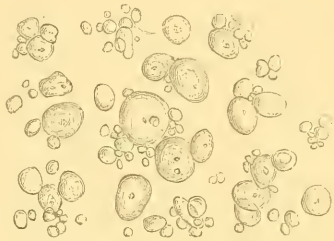
To face page 296.

URINARY DEPOSITS.—EXTRANEOUS MATTERS.

Fig. 11.

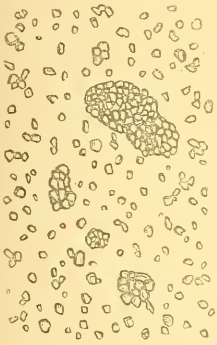
Potato starch. Its appearance in water.
× 215 p. 295

Fig. 12.



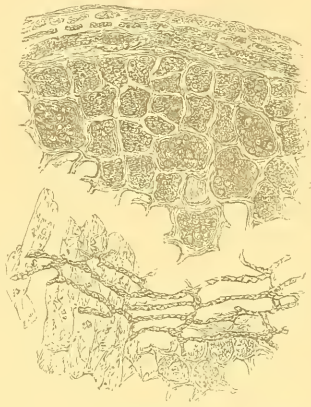
Wheat starch in water. × 215. p. 295.

Fig. 13.



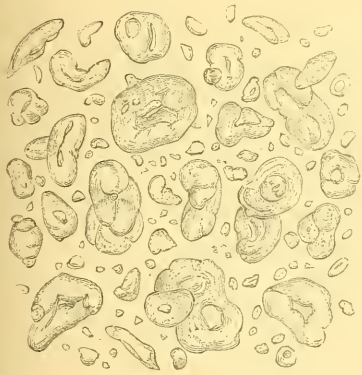
Rice starch in water. × 215. p. 295.

Fig. 14.



Testa and inner tunics of the wheat grain.
× 130 p. 295.

Fig. 15.



Bread crumbs in water. The starch granules are swollen and softened, but still preserve their form
× 215. p. 295.

Fig. 16.

Cells of tissue of potato, in which the starch is contained. A few of the cells are filled with starch granules. × 40 p. 295.

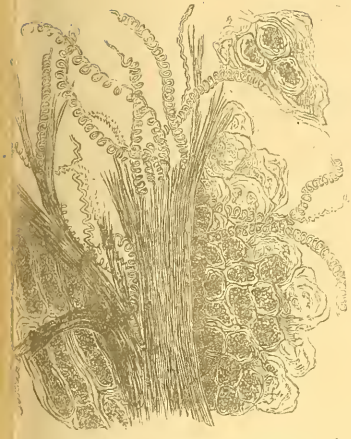
$\frac{1}{1000}$ of an inch |—| × 130.

" " |—| × 215.

[To face page 30

URINARY DEPOSITS.—EXTRANEOUS MATTERS.

Fig. 17.



portion of tea-leaf. Fragments of spiral vessels
e seen projecting from several parts of the
margin. × 215. p. 296.

Fig. 18.

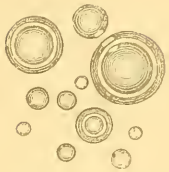
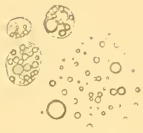
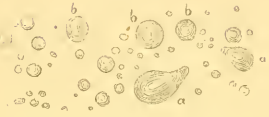


Fig. 19.



Oil globules. Some free
and some contained in
cells. × 215.

Fig. 20.

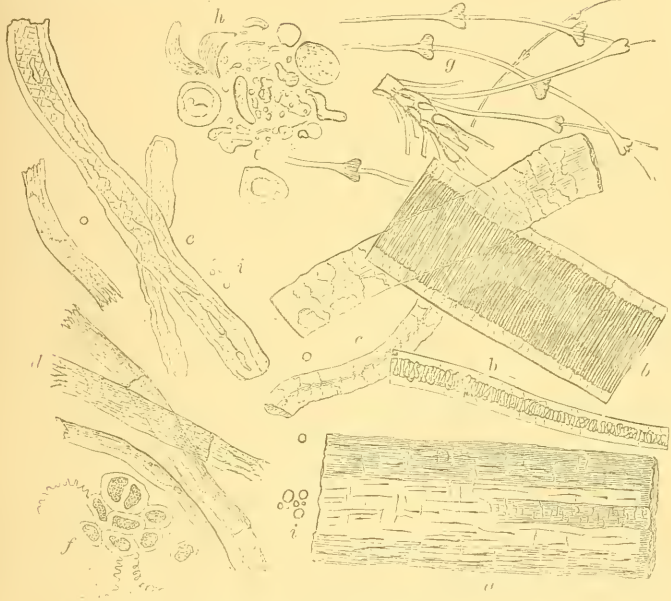


Oil globules. Milk. × 215. p. 296.

Fig. 21.

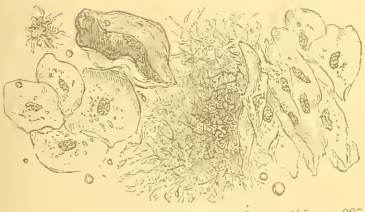
Globules, consisting of
phosphate of lime.
Urine. × 215.

Fig. 22.



Group of various extraneous substances frequently met with in urine. × 215.

Fig. 23.



Epithelium and fungi from the mouth. × 215. p. 297.

Fig. 24.

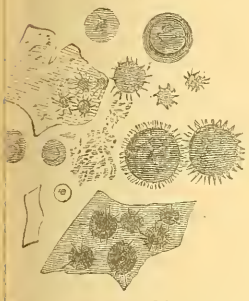
Portions of partially digested striped
muscle. From vomit. × 215. p. 297.

$\frac{1}{1000}$ of an inch. |——| × 215.

[To face page 300.

URINARY DEPOSITS.

Fig. 25.



Crystals of sodium chloride obtained by concentrating healthy urine. × 215. p. 307.

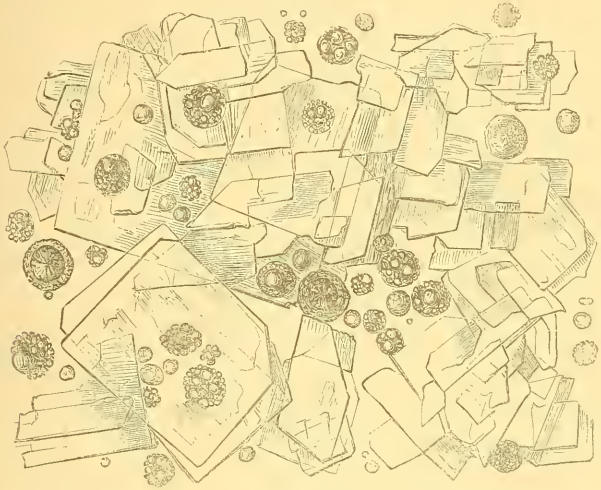
Fig. 26.

Molecular fatty matter of chylous urine. p. 290.

Fig. 27.

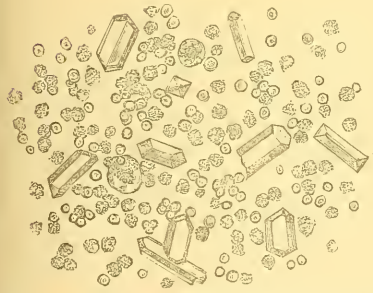
Urate. Ordinary granular deposit, usually termed urate of ammonia. p. 307.

Fig. 28.



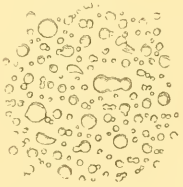
Crystals of cholesterine, obtained from the fatty matter in casts separated from the urine of a case of fatty degeneration of kidneys. × 215. p. 311.

Fig. 29.



Pus and blood corpuscles, with crystals of triple phosphate, from the urine of a man suffering from fungus growths connected with the mucous membrane of the bladder. × 215. p. 315.

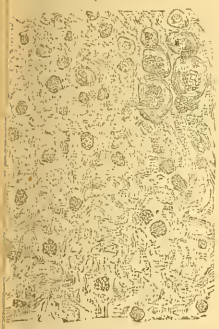
Fig. 30.



Oil globules of milk. × 215

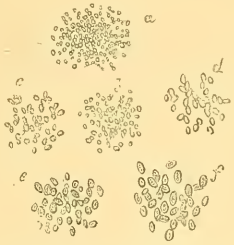
$\frac{1}{1000}$ of an inch ——— × 215.

Fig. 31.



...ning and mucous corpuscles ...ine. In the upper part of the ..., to the right several cells of ...ladder epithelium are repre...sented. × 215. p 318.

Fig. 32.



Penicillium glaucum, developed in acid urine. *a*, within twelve hours after the urine was passed; *b*, one day after; *c*, two days after; *d* four days after; *e*, five days after; *f*, after standing six days. p 322.

Fig. 33.

...dge and vibriones from urine ...three days after it was passed. × 403.

Fig. 34.

...cetable organisms met with ...n urine. *a*, different forms of fungi; *b*, vibriones. × 215.

Fig. 35.

...teria undergoing germination. × 1·00

Fig. 36.

Bacteria germs in oral epithelial cells of the mouth. × 3000.

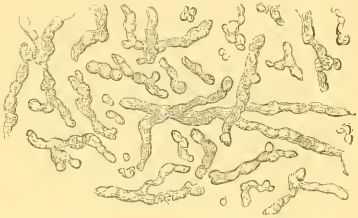
Fig. 37.

The same. × 1800.

Fig. 38.

The same. × 3000

Fig. 39.



Penicillium glaucum, found in diabetic urine four days after it was passed. × 215.

Fig. 40.

...cillium glaucum, from acid urine.

Fig. 41.

Penicillium glaucum × 215.

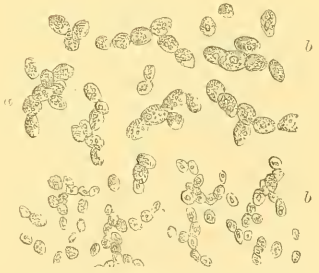
Fig. 42.

Penicillium glaucum, from acid urine. × 215.

Fig. 43.

The sugar fungus from diabetic urine. p ...

Fig. 44.



Yeast added to diabetic urine, and allowed to stand in a warm place forty-eight hours. Showing growth of the torula. p. 323. *a* × 215. *b* × 400.

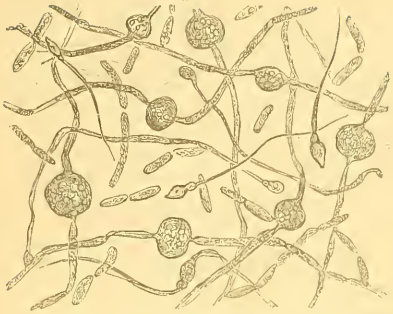
...th of inch ... × 1800.

[To face page ...

Fig. 45.

...nification of yeast fungus
p. 323.

Fig. 46.

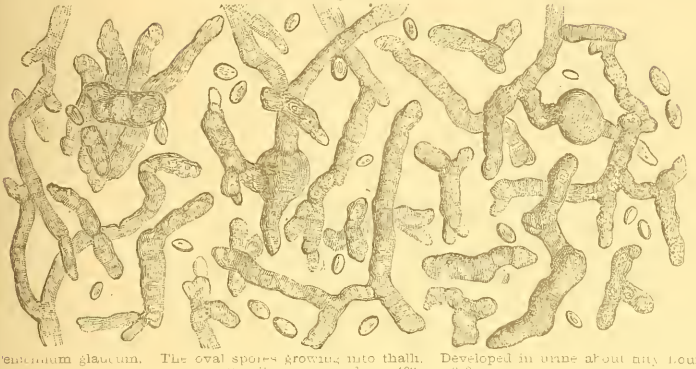


Fungi formed in acid urine. Several spermatozoa are seen amongst the fungous filaments. × 700.

Fig. 47.

...Development of penicillium glaucum. p. 323.

Fig. 48.



Penicillium glaucum. The oval spores growing into thalli. Developed in urine about fifty hours after it was passed. × 400. p. 323

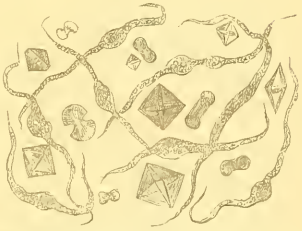
Fig. 49.

Fungi formed in acid urine. From the same specimen as Fig. 46. × 215.

Fig. 50.

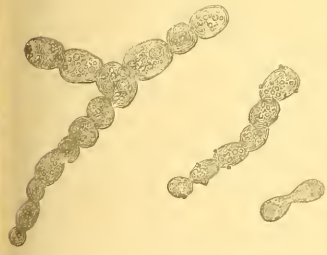
Sporules of fungi, resembling blood corpuscles
p. 361.

Fig. 51.



Curious fungi formed in the urine of a young man passing much oxalate of lime. × 215.

Fig. 52.

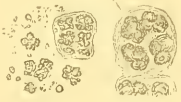


Penicillium glaucum, from vomit. × 700.

Fig. 53.

Sarcinæ ventriculi, ordinary size, from vomit. *a* sarcinæ. *b*, starch granules partially dissolved and rendered transparent. *c*, minute oval fungi usually present in vomit containing sarcinæ. *d*, vibriones. *e*, oil globules. *f*, starch globule from bread, cracked but not as yet softened. × 215.

Fig. 54.



× 700. × 1900.

...rcinæ, from vomit. 'Archives,' vol II., p. 28.)
p. 325.

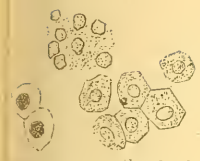
$\frac{1}{1000}$ of an inch ____ × 215.

.. ____ × 700.

To face page ...

URINARY DEPOSITS.—EPITHELIUM.

Fig. 55.



Epithelium from the convoluted portion of the uriniferous tube. *a*, treated with acetic acid. × 215.

Fig. 56.

Epithelium from the pelvis of the human kidney. × 215.

Fig. 57.

Epithelium from the ureter. × 215.

Fig. 58.

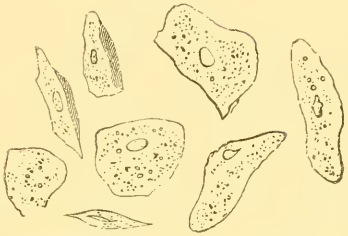
Epithelium from the urethra. × 215.

p 327.

Fig. 59.

Bladder epithelium. *a*, from the general surface *b*, from the fundus. *c*, scaly epithelium from the bladder. × 215. p. 327.

Fig. 60.



Vaginal epithelium from urine. × 215. p. 328.

Fig. 61.

Epithelium from the bladder, showing the hollows in some of the large cells into which the subjacent columnar cells fit. p 327.

Fig. 62.

Epithelium from the vagina. p. 328.

Fig. 63.

Young epithelial cell from the bladder, undergoing division. × 700. p. 327.

Fig. 64.

Formation of pus from germinal matter of epithelial cells. × 215. p. 328.

$\frac{1}{100}$ of an inch |——| × 215.

" " |——————| × 700.

[To face page 335.

Fig. 65.

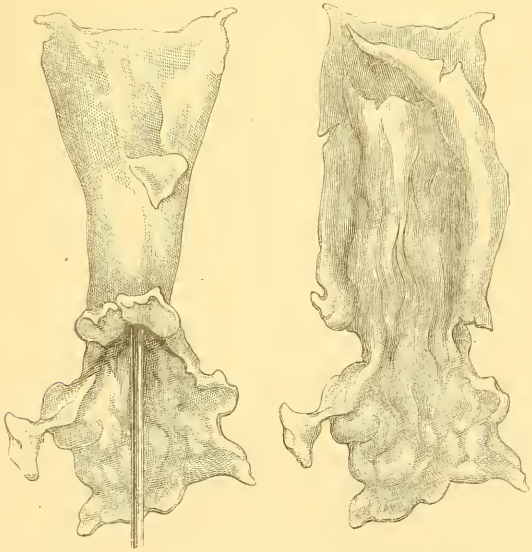
Membranous substance passed with a blood clot during the menstrual period, probably from the vagina. From a preparation of Dr. Tilt's.

Fig. 66.

Fig. 67.

Two fragments of a uterine cast passed by a lady, age 35. These are composed entirely of epithelium.

Fig. 68.



Cast of the womb and vagina, the mucous covering belonging to the former cavity being inverted. From a drawing by Dr. Vannoni, of Florence.

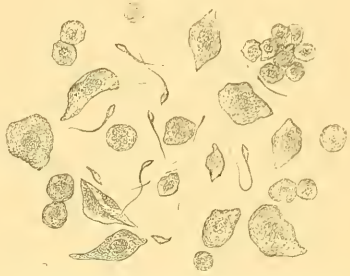
(To follow PLATE VIII

Fig. 69

×215

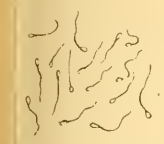
st of the seminal tubes. Spermatozoa embedded in them om an old man upwards of 80 years of age. p. 331

Fig. 70.



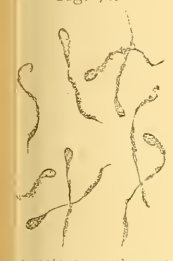
Spermatozoa and cells of vaginal epithelium, removed from the vagina of a little girl a few hours after a rape had been committed × 215. p. 330.

Fig. 71.



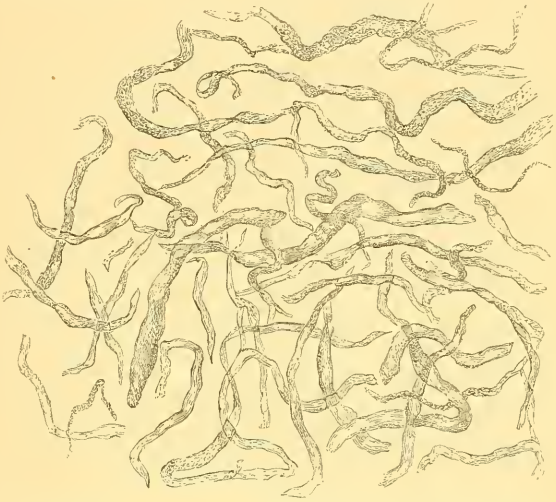
ermatozoa from urine. × 215. p. 329.

Fig. 72.



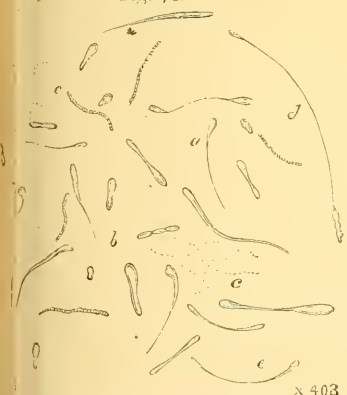
ermatozoa with urate eposited upon them × 700. p. 329

Fig. 73.



Long narrow threads of viscid mucus, associated with the presence of spermatozoa in casts of the seminal tubules. From the urine of a case of slight irritability of the neck of the bladder. × 215. p. 331.

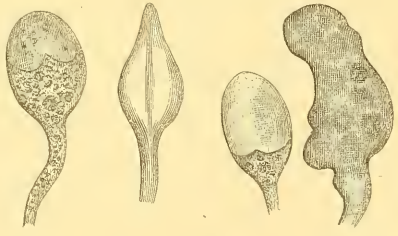
Fig. 74.



× 403

laments of a vegetable nature resembling spermatozoa. × 403. p. 331.

Fig. 75.



a *b* *c* *d*

Body and upper part of the tail of spermatozoon magnified upwards of 3000 diameters

a, spermatozoon containing much living germinal matter. *b*, the same seen edgeways. *c*, spermatozoon containing comparatively little germinal matter. *d*, spermatozoon crushed, showing separate spherical particles of germinal matter. p. 329.

$\frac{1}{10}$ of an inch × 215.

" × 3000.

[To face page 330.

Fig. 76.

Spermatozoa and crystals of phosphate of lime, from the seminal fluid. × 215. p. 339.

Fig. 77.

Waxy casts. *a*, of large size. *b*, small waxy casts. × 215.

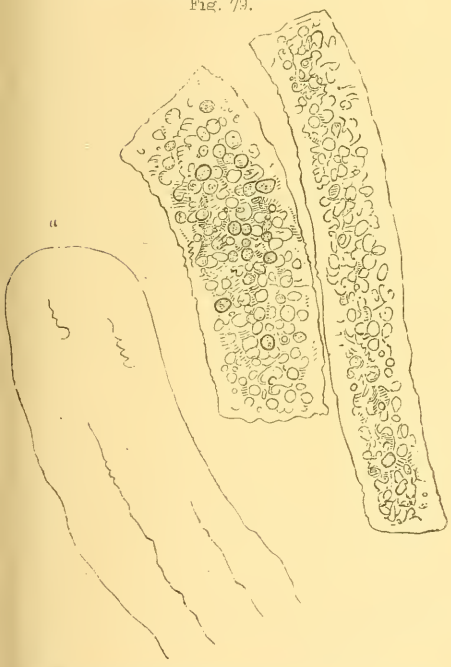
Fig. 78.

Casts containing oil-globules, and free fat-cells, from a case of fatty degeneration of the kidney. × 215.

Fig. 78A.

Small granular casts, from the urine of a patient suffering from chronic nephritis. × 215.

Fig. 79.



Large casts. Some containing many cells, others consisting of a perfectly transparent wax-like material. × 215.

Fig. 80.

Epithelial casts. *a*, casts containing cells of epithelium. *b*, cast containing granular matter. From urine of acute dropsy. × 215.

$\frac{1}{1000}$ of an inch | × 215. p. 341.

[To face page 340.

URINARY DEPOSITS.

Fig. 81.

Mucus cast, from the straight portion of the uriniferous tubes, showing the manner in which the large renal tubes divide and subdivide as they pass towards the base of the pyramids. × 75. p. 342.

Fig. 82.

Mucus casts, with dark brown urate deposited upon their surface and in their substance. They became quite clear and transparent when warmed. × 215. p. 342.

Fig. 83.

Waxy casts of large and small diameter. In the centre of the larger ones casts of small diameter are seen to be embedded. × 50. p. 340.

Fig. 84.

Portion of a mucus cast, which has been formed around a smaller and serpentine one. × 215. p. 342.

Fig. 85.

Casts containing blood corpuscles, from a case of acute nephritis. × 215. p. 342.

$\frac{1}{1000}$ of an inch [ ] × 215.

[To face page 342.

URINARY DEPOSITS.

Fig. 86.

Epithelial and granular casts from the urine of a woman suffering from acute nephritis with dropsy, of a fortnight's duration. *a*, epithelial casts; the cells of renal epithelium are very distinct, and their nuclei well defined. *b*, casts containing brown granular matter and blood corpuscles. *c*, granular casts of a brown colour, many of them containing a few oil globules. *d*, squamous epithelium from the vagina. *e*, epithelium from the bladder. *f*, cells containing oil globules. *g*, portion of a cast containing oil globules. *h*, circular granular cells, probably altered renal epithelium. *i*, fibre of flax, of accidental presence. *k*, blanket hair. × 215. p. 347.

Fig. 87.

Casts from a case of chronic nephritis. *a*, dark granular casts. *b*, casts containing small granular cells and white blood corpuscles. *c*, waxy casts, consisting of a perfectly clear glistening material. *d*, large cast, flattened by pressure, containing white blood corpuscles. *e*, portion of a cast containing a large cell filled with oil globules. *f*, pus corpuscles, probably derived from the bladder. *g*, collections of small oil globules in large cell containing smaller cells in the interior. Of the nature of this I am ignorant, but I have observed such in several specimens of urine. *i*, portions of cotton fibre. *k*, piece of very thin human hair. *l*, fragment of flax. × 215. p. 347.

$\frac{1}{1000}$ of an inch ——— × 215.

[To face page 346.

URINARY DEPOSITS.

Fig. 88.

Casts, acute inflammation of the kidney.

Casts from the urine of a man aged 45, suffering from acute inflammation of the kidneys. There was very slight œdema of the legs. The patient died comatose three weeks after the first symptoms appeared. The urine contained so much albumen that it became perfectly solid upon the application of heat and after the addition of nitric acid.

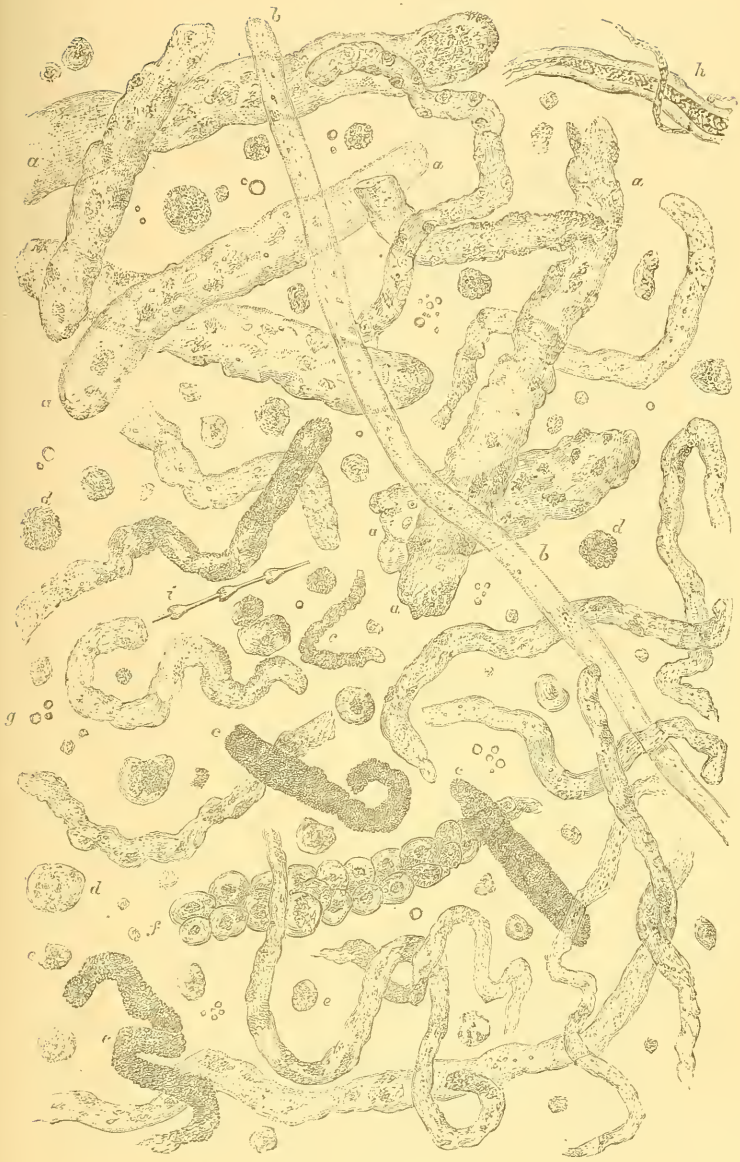
a, perfectly transparent wax-like casts. The shading should be more faint than in the drawing. *b*, a very long wax-like cast, consisting of material deposited at two different periods; the original cast in the interior was probably forced a certain distance further down the uriniferous tube, when a new layer of the coagulable material was deposited around it. *c*, casts filled with cells closely resembling pus corpuscles, but somewhat larger. *d*, the same cells free in considerable number; the greater part of the deposit consisted of these cells. *e*, portion of feather. *f*, piece of cotton fibre. *g*, portion of human hair. *h*, flax fibre. × 215. pp. 311, 318.

$\frac{1}{1000}$ of an inch |____| × 215.

[To face page 345.

URINARY DEPOSITS.

Fig. 89.



Casts. Chronic Nephritis.

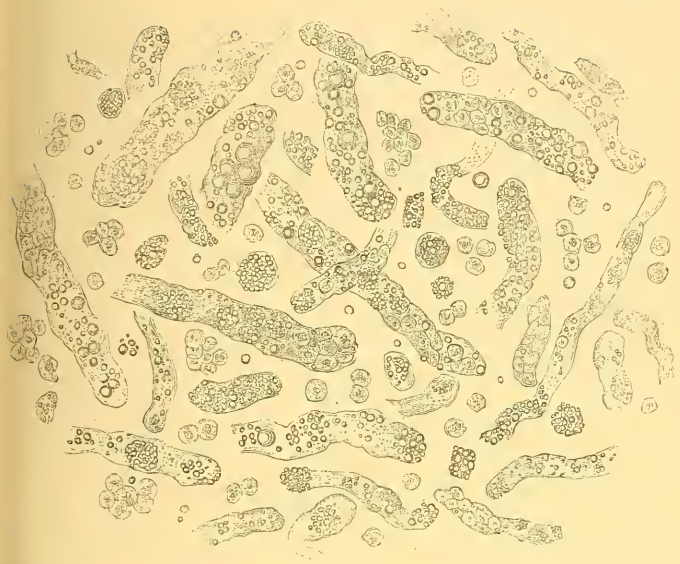
a, casts of large diameter, containing granular matter scattered through them unequally. *b*, a very long, clear and perfectly transparent cast, containing only a few minute oil globules here and there. *c*, dark granular casts, some of them containing a few oil globules. *d*, large masses of granular matter, many of them appearing like granular cells. Most of these are derived from the mucous membrane covering the glans. *e*, cells of renal epithelium, darker and more granular than usual. *f*, mass of squamous epithelium, probably from one of the follicles of the mucous membrane of the bladder. *g*, free oil globules. *h*, portions of cotton fibre. *i*, portion of feather. × 215. pp. 343, 349.

$\frac{1}{1000}$ of an inch [———] × 215.

[To face page 350.

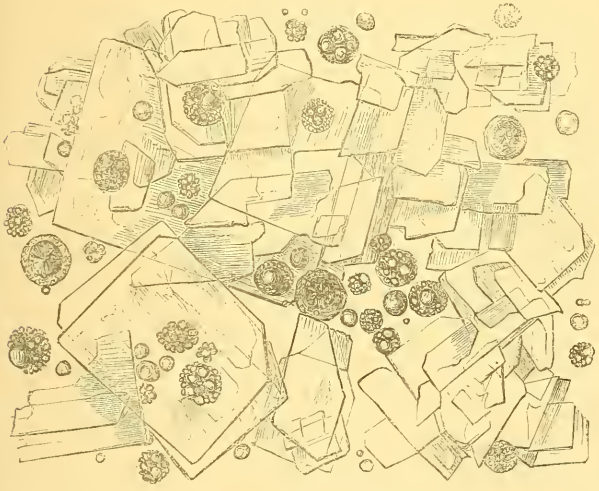
URINARY DEPOSITS.

Fig. 90.



...ells containing oil from the urine of a case of fatty degeneration of the kidney of long standing. Many cells of epithelium contain no oil. × 215.

Fig. 91.



...lobulerine obtained from the fatty matter in casts separated from the urine of a case of fatty degeneration of the kidneys. Globules composed of non-crystalizable fat only are seen scattered in various parts of the field. × 215.

$\frac{1}{1000}$ of an inch [ ] × 215.

[To follow PLATE XV.

URINARY DEPOSITS.

Fig. 92.

Casts of the uriniferous tubes, from a case of acute nephritis. × 215. pp. 345, 348.

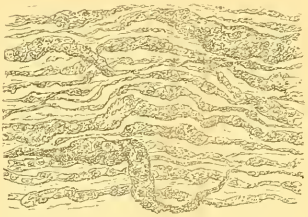
Fig. 93.

Portion of a cast, containing altered and growing white blood corpuscles, from a case of acute nephritis. × 700.

Fig. 94.

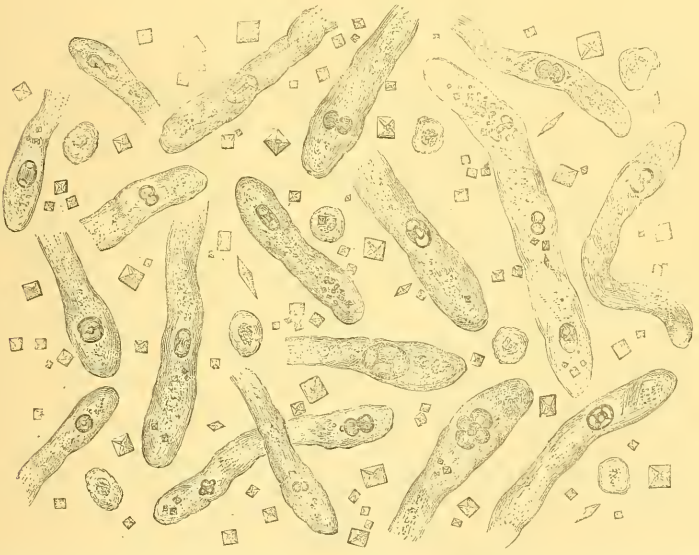
Portion of a cast with distinct cells, probably altered white blood corpuscles. × 700.

Fig. 95.



Shrivelled and wasted uriniferous tubes, from a kidney. No casts could be formed in these tubes. p. 341.

Fig. 96.



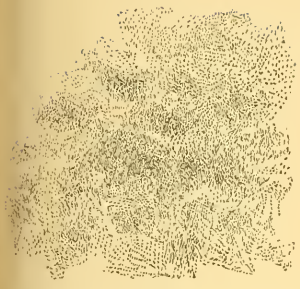
Dumb-bell crystals in casts, proving that these curious crystals are formed in the uriniferous tubes. From the urine of a case of cholera. The specimen containing these casts was the first portion passed after eighteen hours complete suppression. It contained a trace of albumen. Octahedra were present in the surrounding fluid. × 215.

p. 344.

$\frac{1}{1000}$ of an inch |____| × 215.

[To follow PLATE XVII.

Fig. 97.

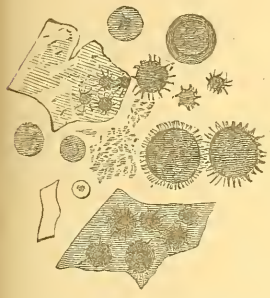


Ordinary granular deposit, usually termed urate or lithate of ammonia, but consisting of urate of soda with small quantities of urates of ammonia, lime, and magnesia × 215. p. 351.

Fig. 98.

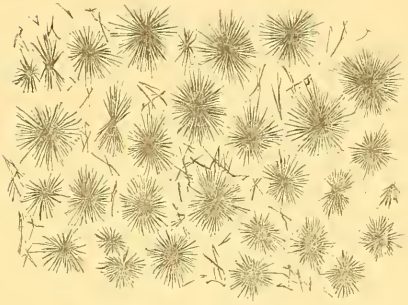
Urate of soda, prepared artificially. × 215. p. 351.

Fig. 99.



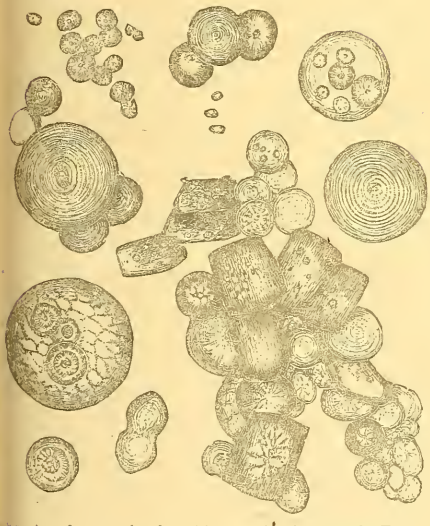
Urate of soda and films of triple phosphate, formed on the surface of concentrated urine. p. 351.

Fig. 100.



Urate of ammonia prepared artificially. × 215. p. 351.

Fig. 101.

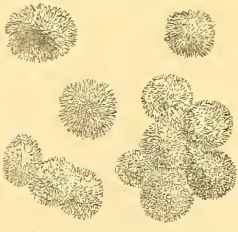


Globules of urate of soda, with crystals of uric acid. From a case of long continued remittent fever. Sent by Dr Kennion, of Harrogate. × 215. p. 352.

Fig. 102.

Urate of ammonia, prepared artificially. × 215. p. 351.

Fig. 103.

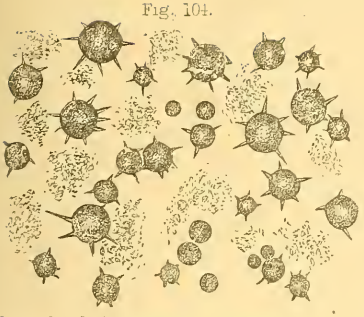


Urate of ammonia, prepared artificially. × 215. p. 351.

$\frac{1}{1000}$ of an inch |—| × 215

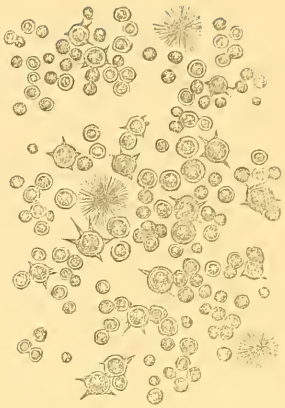
[To face page 353

Fig. 104.



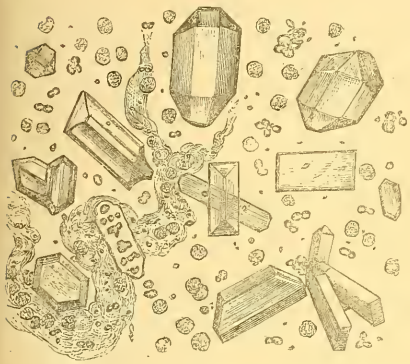
Urate of soda in spherical masses, from various parts of which minute acicular crystals of uric acid project. × 215. p. 350.

Fig. 105.



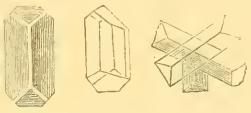
Urate of soda in a globular form, as commonly found in the urine of children. × 215. p. 350.

Fig. 106.



Crystals of ammoniaco-magnesian phosphate, with urates, mucus and pus corpuscles. From a case of catarrh of the bladder of a man aged 40. Three years' standing. p. 355.

Fig. 107.

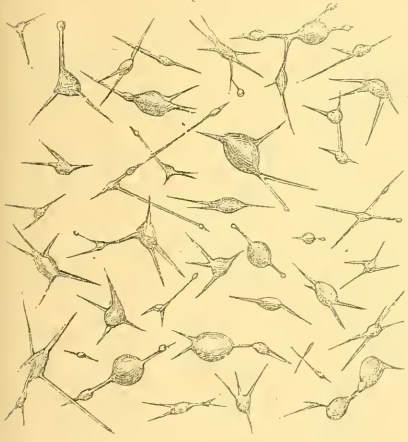


Prismatic crystals of triple phosphate, showing their form. p. 355.

Fig. 108.

Triple or ammoniaco magnesian phosphate, from acid urine. × 215.

Fig. 109.



Urate of soda, prepared artificially. × 215. p. 351.

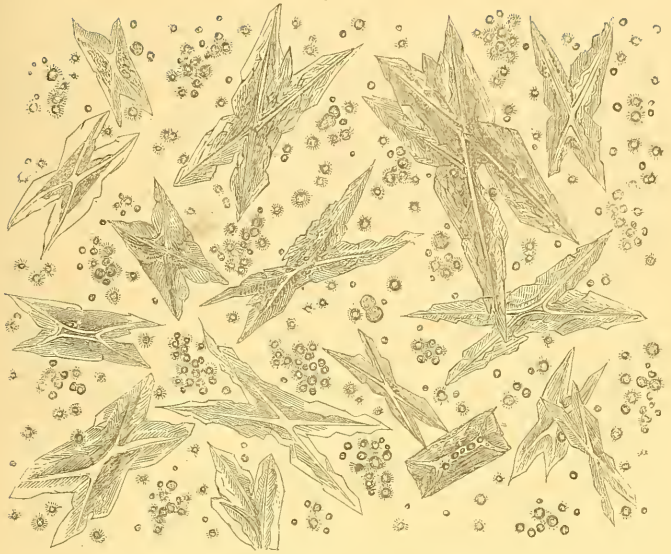
Fig. 110.

Lancet-form crystals of urate of soda, from urine of a patient suffering from peritonitis. × 215. p. 351.

$\frac{1}{100}$ of an inch. [illegible] × 215.

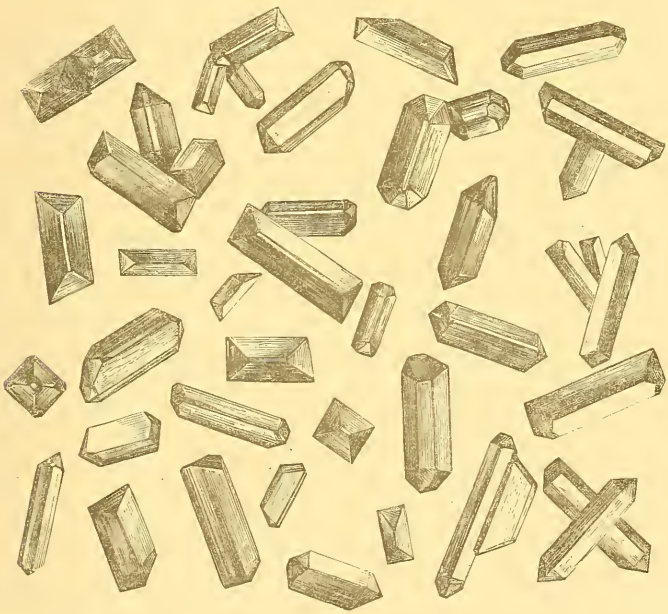
To face page 352.

Fig. 111.



Beautiful crystals of triple or ammoniaco-magnesian phosphate and spherules of urate of soda. × 215. pp. 352, 355.

Fig. 112.



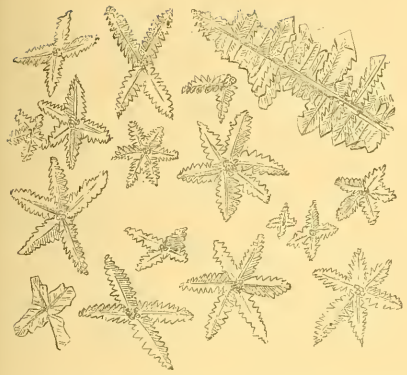
Crystals of triple phosphate $_2MgONH_4O.PO_5 + 12aq$. In the form of triangular prisms, with obliquely truncated extremities, as they frequently occur in urine. In many cases the crystals are four-sided. Not unfrequently the shaft of the crystal is so short that the two triangular extremities are seen quite close together, and the crystal, without care, might be mistaken for an octahedron. × 45. p. 355. See also Pl. XXXIII. Fig. 180.

$\frac{1}{100}$ of an inch ×40.

$\frac{1}{1000}$ " ×215.

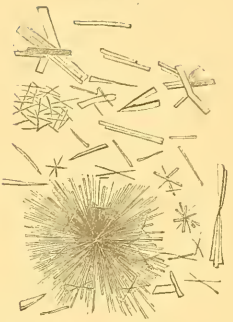
[To face page 353

Fig. 113.



Crystals of triple phosphate formed by the addition of ammonia to urine. The crystals being rapidly developed are precipitated in this very beautiful star-like form. If, however, these remained for some time in the urine they would gradually assume the prismatic form. The more highly magnified drawing of one of the arms of a crystal in the upper part of the figure shows how this change in crystalline form takes place. × 215 p. 355.

Fig. 114.



Crystals of phosphate of lime occasionally met with in urine. × 215. p. 366.

Fig. 115.

Drawing of a urinary deposit, consisting of crystals of phosphate of lime and numerous octahedra of oxalate of lime, with a little mucus. × 215. p. 357.

Fig. 116.

Phosphate of lime in the form of dumb-bells, from the mucus of the gall bladder. × 215. p. 366.

Fig. 117.

Unusual form of triple phosphate. From the urine of a patient suffering from indigestion in the very hot weather. × 215. p. 357.

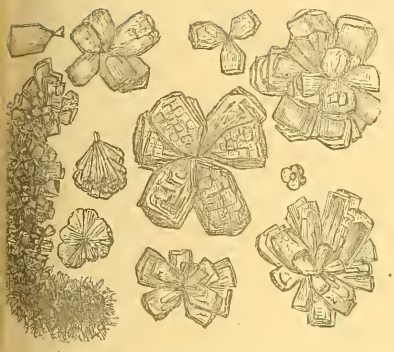
Fig. 118.

Large dumb-bells of phosphate of lime. p. 366.

$\frac{1}{1000}$ of an inch. × 215.

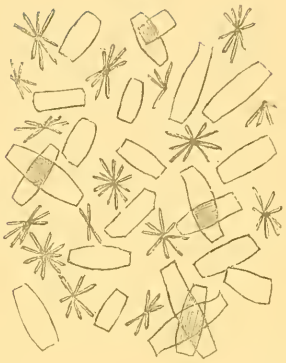
To face page

Fig. 119.



hosphate of lime, crystallized in the form of fan-like plates. × 215. p. 358.

Fig. 120.

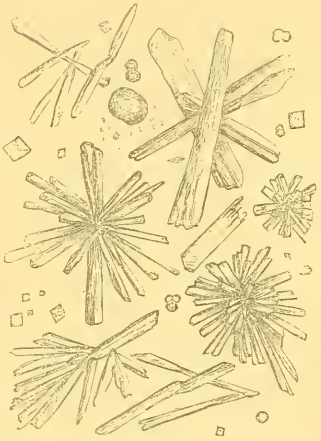


Two forms of phosphate of lime mounted in Canada balsam. × 215. p. 358.

Fig. 121.

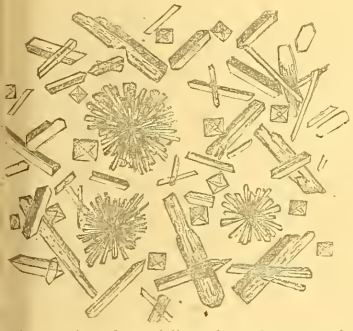
rystals of triple phosphate and phosphate of lime. × 130. p. 358.

Fig. 122.



Phosphate of lime. From urine. × 130. p. 358.

Fig. 123.



sphate and oxalate of lime, from the urine of a ng man enjoying good health, but taking little exercise. × 215. p. 358.

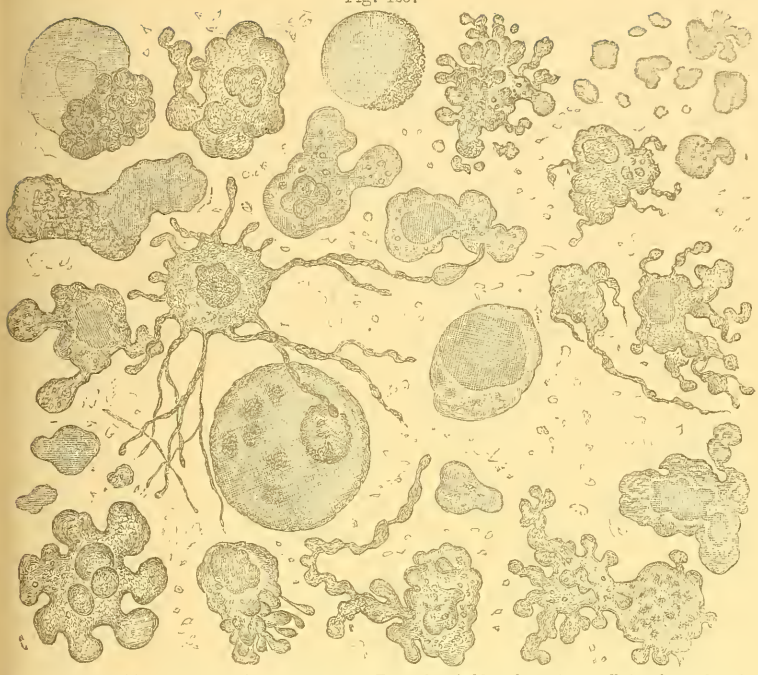
Fig. 124.

Deposit from the urine of a man suffering from gouty kidney, consisting of a peculiar form of phosphate of lime, with granular casts and casts containing oil. × 215. p. 358.

$\frac{1}{1000}$ of an inch ⌊——⌋ × 215.

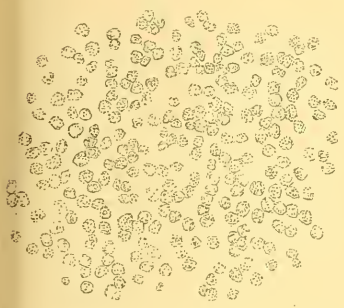
[To face page 360.

Fig. 125.



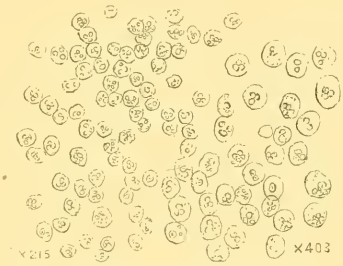
Pus corpuscles exhibiting very active movements. From the bladder of a patient suffering from chronic inflammation. Showing alterations in form due to (vital?) movements. × 1300. p. 364.

Fig. 126.



Pus corpuscles from urine. × 215. p. 364.

Fig. 127.



Pus corpuscles which have been acted upon by acetic acid. p. 364.

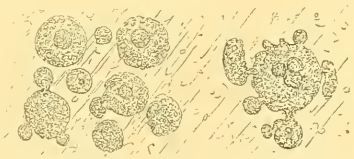
a Fig. 128. *b*

Pus corpuscles under the action of acetic acid *a*, action commencing. *b*, complete. × 215. p. 364.

Fig. 130.

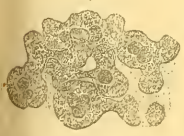
Formation of pus from germinal matter or epithelial cells. × 215. p. 362.

Fig. 131.



Growth and multiplication of pus corpuscles when free. p. 364.

Fig. 129.



s corpuscles showing proto- berances. × 700. p. 364.

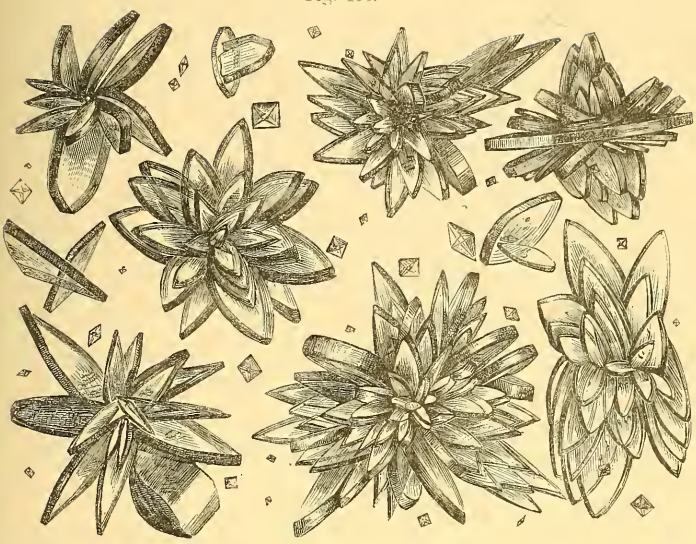
Fig. 132.

Multiplication of pus corpuscles by detachment of protruding portions from each corpuscle. × 700. p. 364.

[To face page 364.

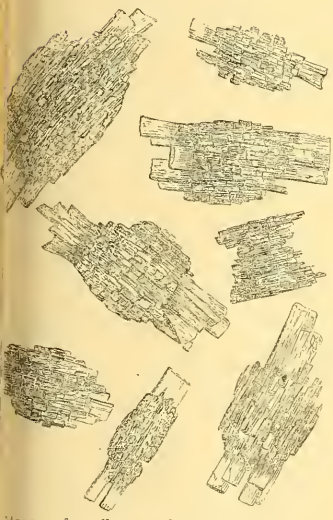
URINARY DEPOSITS.

Fig. 133.



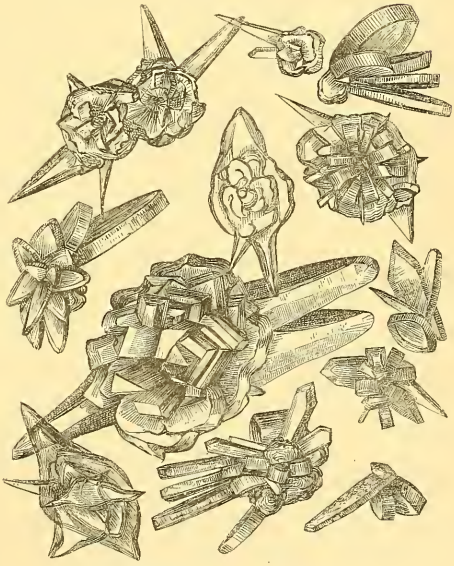
Groups of crystals of uric acid, often termed 'cayenne-pepper grains,' with octahedra of oxalate of lime. × 215.

Fig. 134.



Masses of small uric acid crystals. × 215.

Fig. 135.

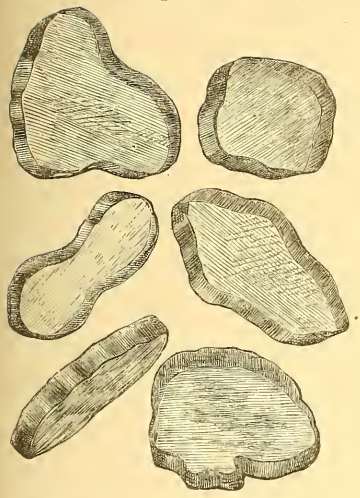


Beautiful aggregations of uric acid × 215.

$\frac{1}{1000}$ of an inch [ ] × 215.

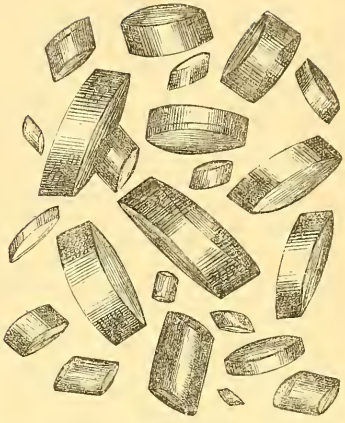
To face page 384.

Fig. 136.



Large fiddle-shaped flattened crystals of uric acid.
× 130.

Fig. 137.

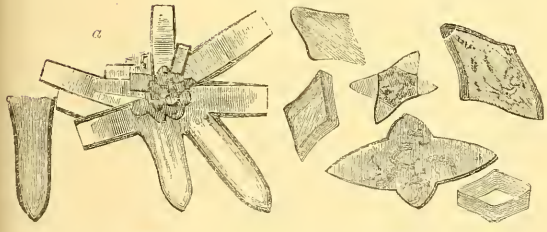


Uric acid from urine × 130

Fig. 138.

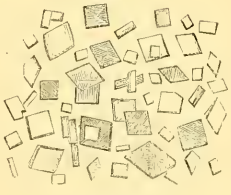
Curious forms of uric acid from urine × 215

Fig. 139.



Large halbert-shaped crystals of uric acid *a*, 'cayenne-pepper' grain.
× 215.

Fig. 140.



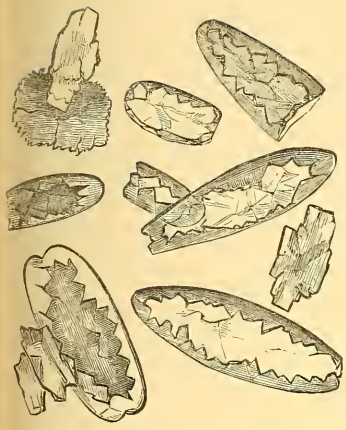
Minute crystals of uric acid.
× 215.

$\frac{1}{1000}$ of an inch |—| 130.

,, ,, |—| × 215.

[To follow PLATE XXIV.

Fig. 141.

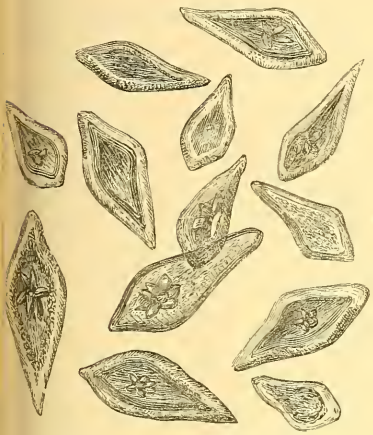


nous lamellar crystals of uric acid, perfectly colourless. Sent by Mr. Lawrence. × 215.

Fig. 142.

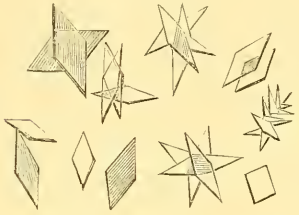
Lozenge-shaped crystals of uric acid, precipitated by the addition of acid to urine. × 215.

Fig. 143.



Crystals of uric acid from urine. × 130.

Fig. 144.

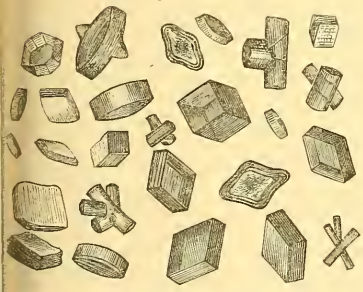


Lozenge-shaped crystals of uric acid obtained by adding acid to urine. × 215.

Fig. 145.

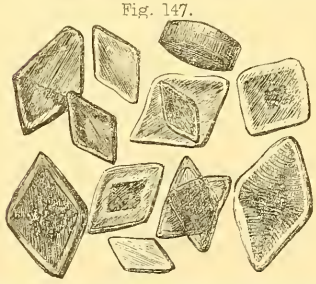
Common forms of uric acid crystals.

Fig. 146.



mmon rhomboidal and cubical forms of uric acid from urine. × 215.

Fig. 147.

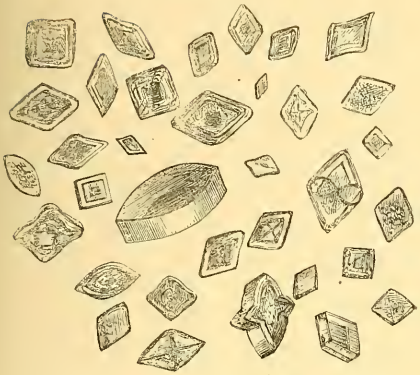


Large crystals of uric acid, deposited in urine after standing. × 130.

$\frac{1}{1000}$ of an inch |__| × 130.
" " |___| × 215.

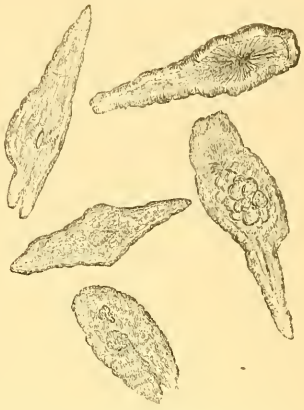
[To follow PLATE XXV.

Fig. 148.



Rhomboidal crystals of uric acid. Very common form × 215.

Fig. 149.

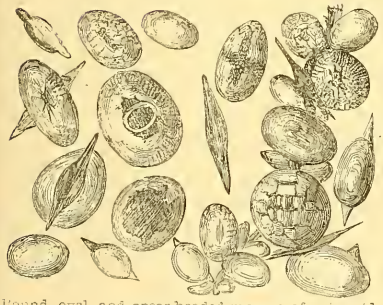


Curious forms of uric acid, deposited in the urine of a case of fatty degeneration of the kidneys. × 130.

Fig. 150

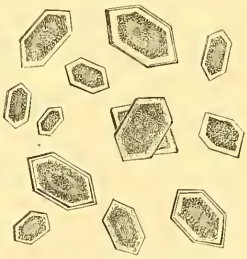
Large, very transparent glomeruli of uric acid, from urine. × 130.

Fig. 151.



Round, oval, and spear-headed masses of uric acid. Deposited from urine. × 215

Fig. 152.



Hexagonal crystals of uric acid. This form occurs in urine very rarely × 130.

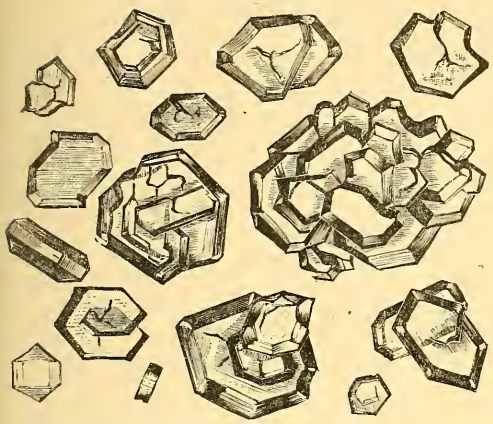
$\frac{1}{100}$ of an inch [ ] × 130.

,, ,, [ ] × 215.

[To follow PLATE XXVI.

URINARY DEPOSITS.

Fig. 153.



Perfectly colourless crystals of uric acid, resembling cystine. From the urine of an epileptic patient. Sent by Dr. Head. × 215.

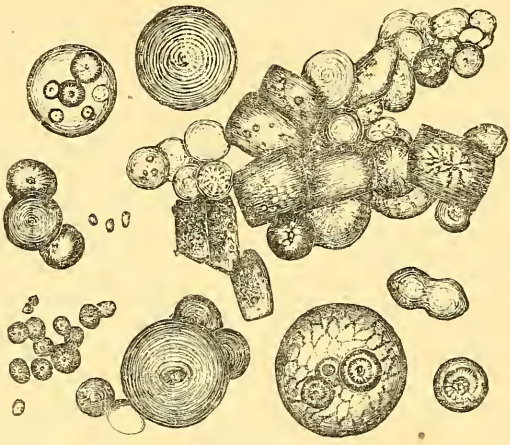
Fig. 154.

Small crystals of uric acid of a rhomboidal form; many of them resemble sections of small cylinders.

Fig. 155.

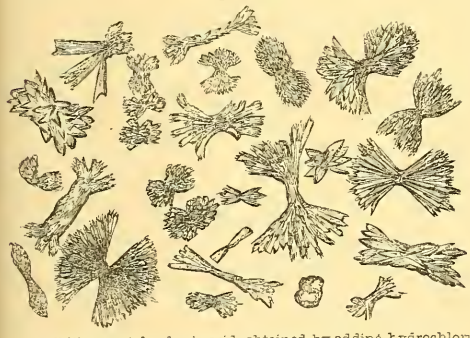
a, large spherules of urate of soda. *b*, film composed partly of urate of soda and partly of uric acid. *c*, uric acid. From the urine of a case of long-continued bilious and remittent fever. Sent by Dr. Kennion. × 42.

Fig. 156.



The spherules of urate of soda (Fig. 155) more highly magnified × 215.

Fig. 157.



Dumb-bell-like crystals of uric acid, obtained by adding hydrochloric acid to urine. Sent by T. W. Roper, Esq. × 215.

Fig. 158.

Crystals of uric acid, partly disintegrated. From a specimen which had been preserved for many years in the naphtha and creosote fluid. × 215.

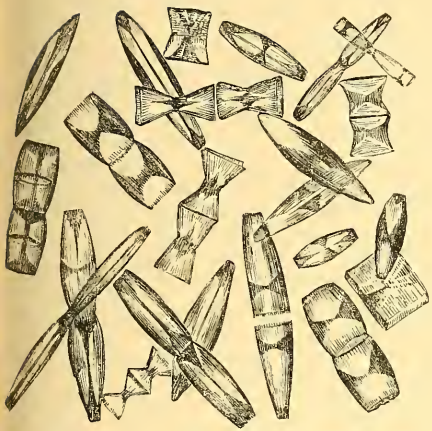
$\frac{1}{1000}$ of an inch ⌴ × 42.

,, ,, ⌴ × 215.

[To follow PLATE XXVII.

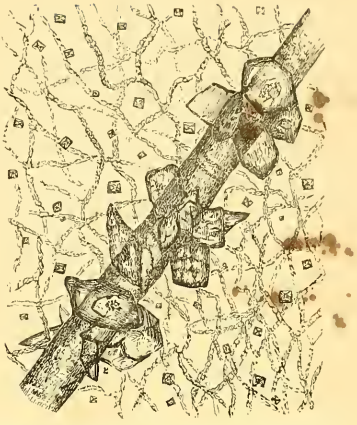
URINARY DEPOSITS.

Fig. 159.



Curious crystals of uric acid. From a specimen of urine sent by Mr. Atchley. × 215.

Fig. 160.

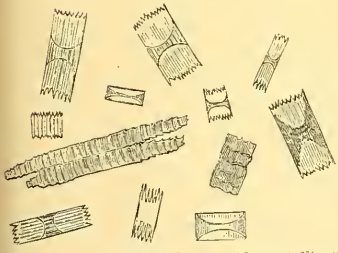


Uric acid crystallized round a hair; also octahedra of oxalate of lime, and penicillium glaucum. From the urine of a patient suffering from chronic bronchitis and emphysema. × 215.

Fig. 161.

Very large and symmetrical crystals of uric acid, from urine. The form and peculiar markings of the crystals are well seen. × 215.

Fig. 162.



Forms of uric acid produced by rapid crystallization after the addition of nitric or hydrochloric acid to urine. × 215.

Fig. 163.

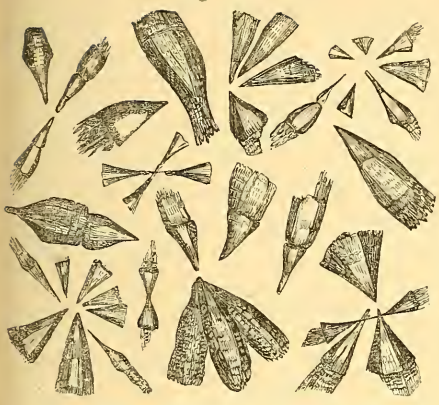
Small crystals of uric acid massed together so as to form a plate. × 215.

p. 372.

$\frac{1}{1000}$ of an inch ⌊___⌋ × 215.

[To follow PLATE XXVIII.

Fig. 164.

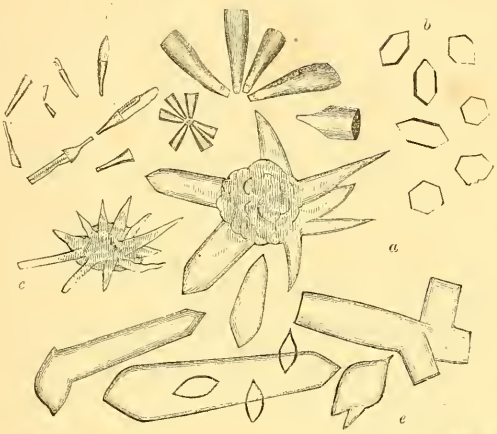


Quadrilateral pyramidal crystals of uric acid. Precipitated from urine by nitric acid. × 215. p. 371.

Fig. 165.

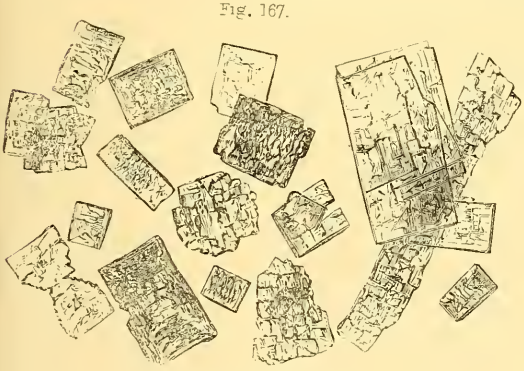
Uric acid from the urine of a case of fatty degeneration of the kidneys. × 45.

Fig. 166.



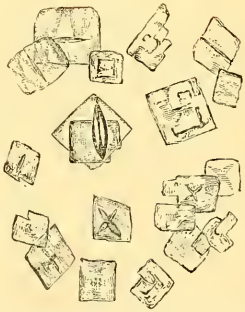
Less common forms of uric acid crystals. *a*, crystal like cayenne-pepper grain. *b*, six-sided crystals. *c*, mass with small uric acid crystals projecting from it. *d*, small pyramidal crystals of uric acid: very uncommon. *e*, peculiar forms of uric acid.

Fig. 167.



Irregularly shaped crystalline plates, consisting of uric acid From urine. × 215.

Fig. 168.



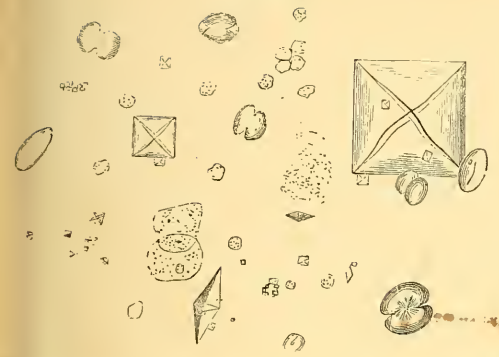
Two forms of uric acid. From a specimen of urine sent by Mr. Atchley. × 45

$\frac{1}{1000}$ of an inch — × 42.

" " —— × 215.

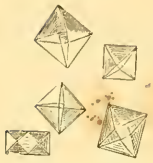
[To follow PLATE XXIV

Fig. 169.



umb-bell and octahedral crystals of oxalate of lime. One very large octahedron is seen at the right-hand side of the figure. × 215. p. 378.

Fig. 170.

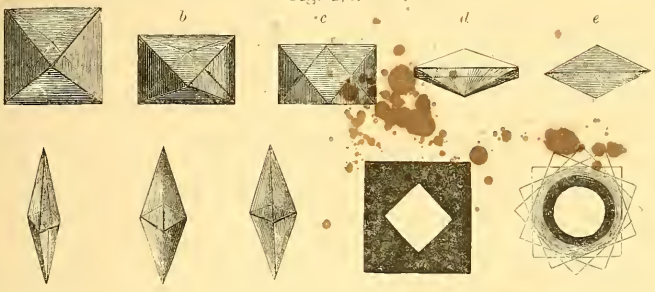


Octahedral crystals of oxalate of lime. × 215.

Fig. 171.

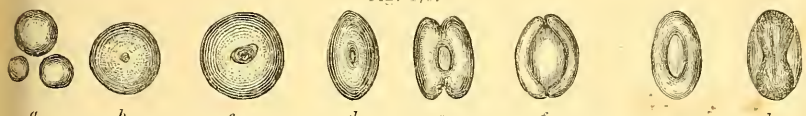
Curious prismatic crystal of oxalate of lime. p. 375.

Fig. 172.



a, *b*, *c*, *d*, *e*, to illustrate the appearance of the same octahedron of oxalate of lime viewed in different positions. The crystal is supposed to be seen first lying upon one of its broad surfaces, and then gradually rotated FROM the observer until one edge is opposite the eye. *f*, *g*, *h*, the same crystal seen sideways, one of the lateral angles being towards the eye. *i*, the appearance of an octahedron when mounted as a dry object. *k*, unusual form of compound crystal of oxalate of lime. p. 375.

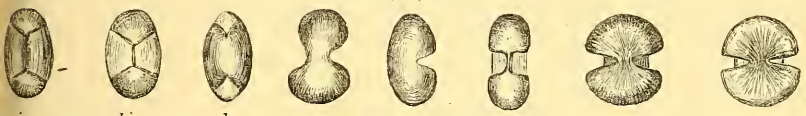
Fig. 173.



Circular and oval forms. p. 377

Dumb bell crystals and allied forms of oxalate of lime. p. 377

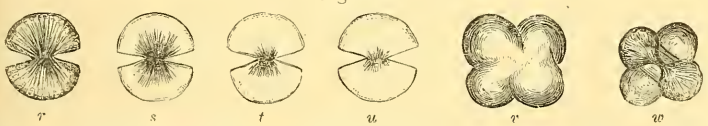
Fig. 174.



umb-bell crystals and allied forms of oxalate of lime

Crystals approximating in form to the perfect dumb-bell.

Fig. 175.

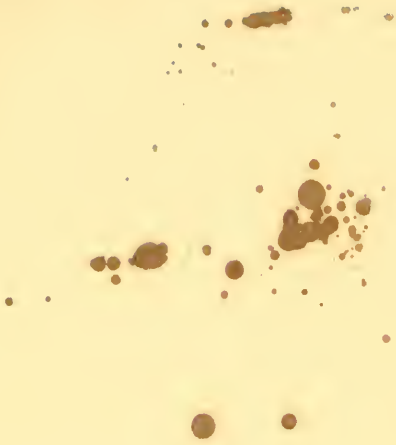


Perfect dumb-bell crystals of oxalate of lime which have been subjected to the prolonged action of weak acetic acid, by which much of the salt has been dissolved out from the organic matrix, which exhibits the appearance of a cell wall. p. 376.

Masses consisting of two dumb bell crystals joined together.

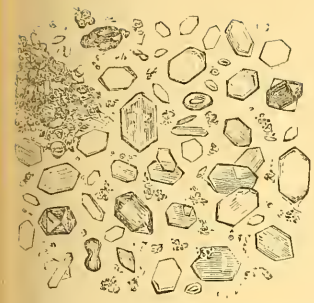
$\frac{1}{1000}$ of an inch [ ] ×

(To follow PLATE XXX.



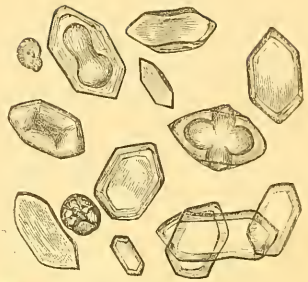
URINARY DEPOSITS.

Fig. 176.



lified forms of oxalate of lime. From the urine of a
who was poisoned by oxalic acid. p. 382. × 215.

Fig. 177.



Some of the crystals in Fig. 176 magnified 550. p. 382.

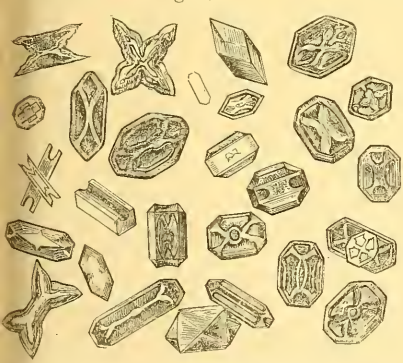
Fig. 178.

utiful feathery crystals of phosphates of lime and magnesia, with
ections of octahedra of oxalate of lime, the angles of which are
rounded. p. 380. × 215.

Fig. 179.

Small globules and octahedra of oxalate of
lime.

Fig. 179*.



utiful crystals of triple phosphate, exhibiting peculiar
markings resulting from partial solution. × 215.

Fig. 180.

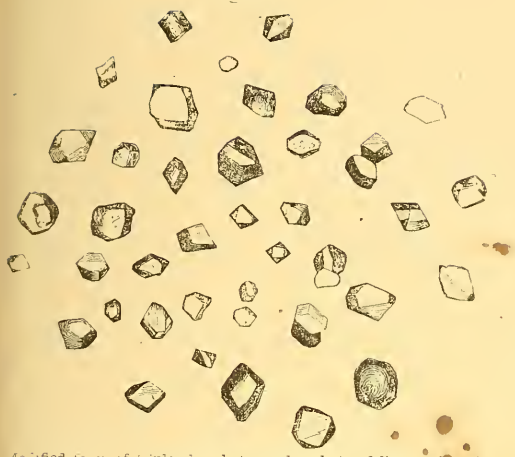
Crystals of triple phosphate; the prismatic portion of
which is defective, and casts containing oil from the urine
of a patient suffering from chronic nephritis, with partial
fatty degeneration. p. 380.

$\frac{1}{1000}$ of an inch ——— × 215.

[To follow PLATE XXXI.

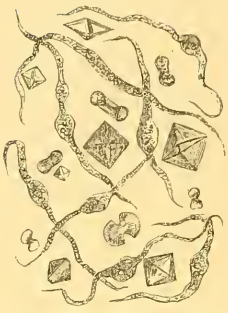
URINARY DEPOSITS.

Fig. 181.



Modified form of triple phosphate or phosphate of lime and triple phosphate. × 150. Sent by Mr. Richardson, of Dublin.

Fig. 181*.

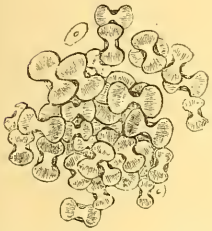


Octahedra and dumb-bells of oxalate of lime, and curious forms of fungi found in the urine of a young man passing much oxalate of lime. × 215.

Fig. 184.

Dumb-bells subjected to the prolonged action of acetic acid, showing the crystalline material nearly dissolved away. p. 377.

Fig. 182.



Collection of dumb-bells firmly adherent to each other. Such a mass might very easily become converted into a small calculus by deposition of material of a similar composition in the intervals. p. 379 × 215.

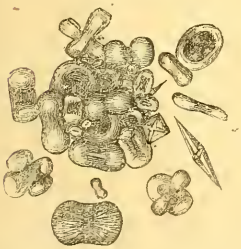
Fig. 183.

Minute crystals of oxalate of lime, with sporules of fungi resembling blood corpuscles. × 215.

Fig. 185.

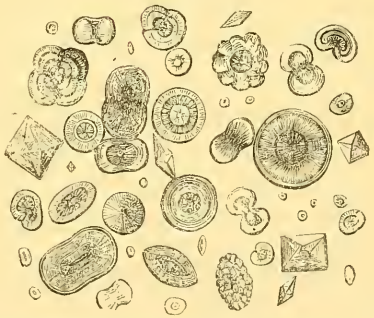
Perfect dumb-bell crystals from the urine of a child, two years old, suffering from jaundice. p. 379. × 215.

Fig. 186.



Dumb-bell crystals of oxalate of lime aggregated together, and forming a minute calculus. p. 379. × 215.

Fig. 187.

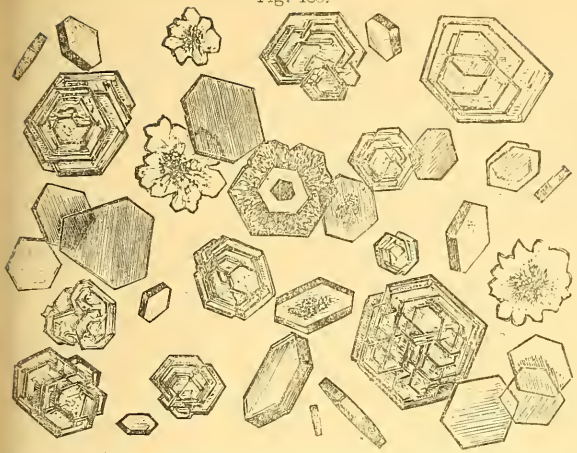


Spherical, oval, and dumb-bell crystals of oxalate of lime, with larger spherules, which may be regarded as microscopic calculi. × 215

$\frac{1}{1000}$ of an inch [ ] × 2.5.

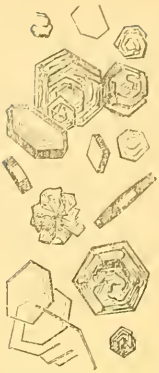
[To follow PLATE XXXII.

Fig. 188.



Crystals of cystine from the urine of an insane patient. Numerous crystals of uric acid were also present in the deposit. p. 383. × 215.

Fig. 189.

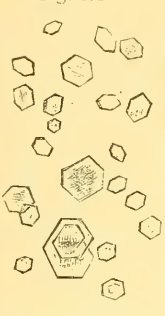


Crystals of cystine. p. 383. × 215.

Fig. 190.

Clusters of crystals of cystine, formed by evaporating a solution of the crystals represented in Fig. 188 in ammonia. × 215.

Fig. 191.

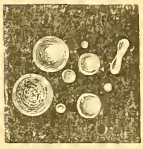


Six-sided crystals of cystine, formed from a solution of the crystals in ammonia.

Fig. 192.

Irregularly formed crystals of cystine, formed by allowing the ammoniacal solution (Figs. 190, 191) to evaporate to dryness. × 215.

Fig. 193.

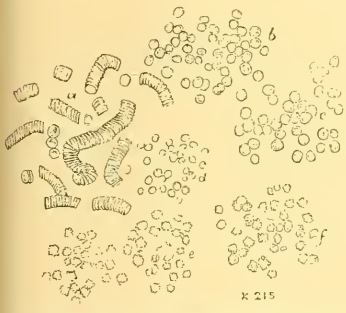


Crystals of carbonate of lime, seen by reflected light. p. 387.

Fig. 196.

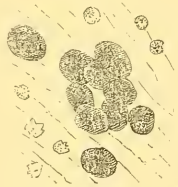
Crystals of carbonate of lime, in Canada balsam; seen by transmitted light. p. 387.

Fig. 194.



Blood corpuscles, *a*, *b*, *c*, taken from the living body; *d*, *e*, *f*, from the urine. *d*, corpuscles smaller than natural; at *e* their circumference is serrate and ragged; and at *f* a somewhat similar appearance is shown. p. 388.

Fig. 195.



Large cells filled with granular matter; chronic bronchitis. p. 390.

Fig. 199.

Epithelium from the uriniferous tubes and pelvis of the kidney, with granules of colouring matter embedded in them. p. 390. × 215.

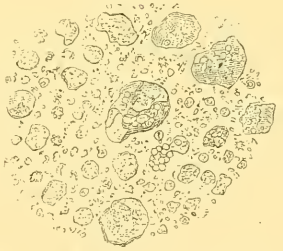
Fig. 197.

Tubercle corpuscles from a tubercle in the lung. p. 394. × 215.

Fig. 198.

Cells found in the urine of a case of renal dropsy. p. 395.

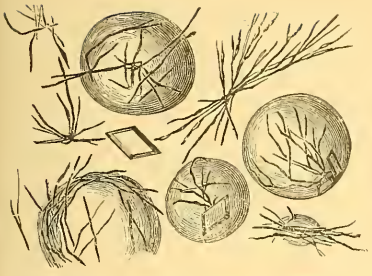
Fig. 200.



Intermediate renal stage of the menstrual secretion. p. 388.

[To face page 5

Fig. 201.

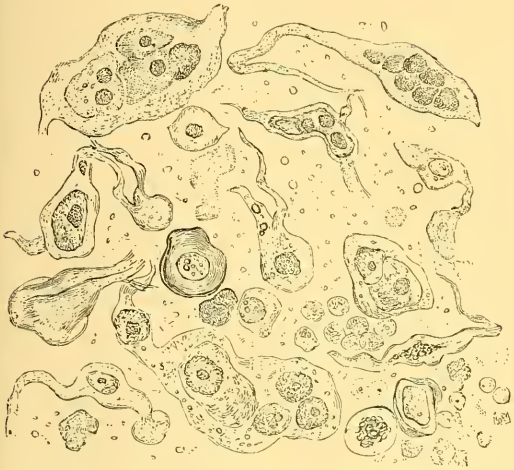


Rhomboidal and feathery crystals of hæmatoidin from a softened clot. Human. p. 389. × 215.

Fig. 202.

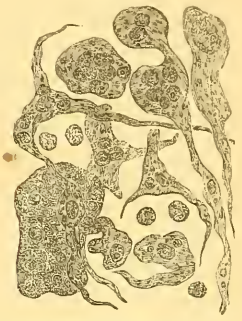
Feathery crystals of hæmatoidin found in the urine a fortnight after slight rupture (?) of one kidney. Human subject. p. 389. × 215.

Fig. 203.



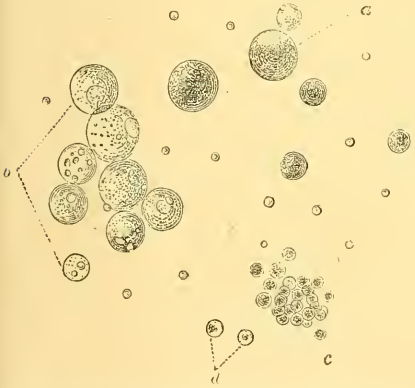
Cancer cells from the urine in a very bad case of cancer of the uterus. The deposit was very abundant. p. 394.

Fig. 204.



Cancer cells found in urine. From the bladder. p. 394.

Fig. 205.



Cells from the urine of a case of acute rheumatism. *a*, in the natural state. *b*, treated with acetic acid. *c*, resembling pus. *d*, the same treated with acetic acid. The small circular bodies are blood corpuscles. p. 395.

Fig. 206.

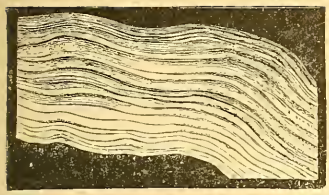
Blood clots in the form of irregularly shaped cords. From the vagina, found in urine. p. 390. × 215.

$\frac{1}{1000}$ of an inch | | × 215.

All these figures × 215.

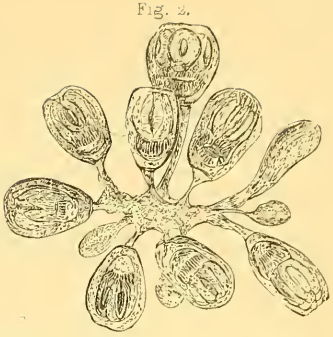
(To face page [illegible])

Fig. 1.



Layers of which the wall of an hydatid cyst is composed. p. 397. × 215.

Fig. 2.



Echinococci from hydatid. Liver of ox. p. 398. × 10.

Fig. 3.

Echinococci. p. 398. × 42.

Fig. 4.

Free hooklets from echinococcus. p. 399. × 215.

Fig. 5.

Hooklet of echinococcus. p. 399. × 300.

Fig. 6.

Tænia echinococcus. p. 398. × 15.

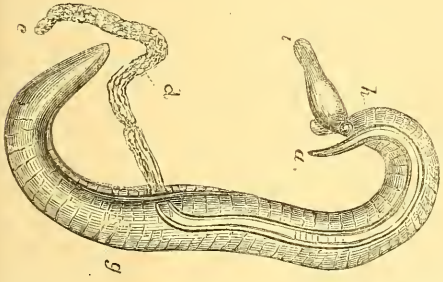
Fig. 7.

Diplosoma crenata; one-half the real size. After Dr. Farre. p. 399.

Fig. 8.

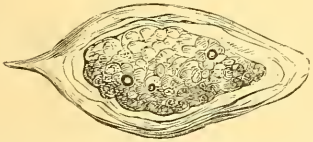
Ova of bilharzia hæmatobia in urinary deposit. Drawn from a preparation of Dr. Harley's. p. 401. × 15.

Fig. 11.



Bilharzia hæmatobia. *a, c, d*, the female lodged in the gynæcophoric canal of the male, *h, i, g*. After Bilharz.

Fig. 9.



Ovum of bilharzia hæmatobia, from a specimen of Dr. John Harley's. p. 401. × 215.

Fig. 10.

Ova of bilharzia hæmatobia, from urine Drawn from Dr. Harley's preparations p. 401. × 130

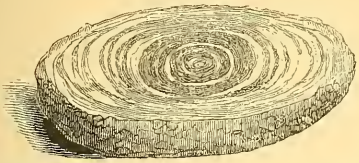
$\frac{1}{1000}$ of an inch |___| × 180.

" " |___| × 215.

(To face page 402

URINARY CALCULI.

Fig. 1.

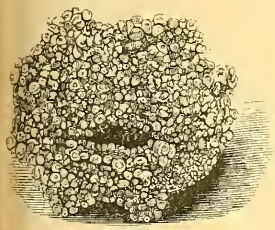


Large uric acid calculus, consisting of concentric layers of uric acid, deposited upon a smaller calculus composed of oxalate of lime. p. 407.

Fig. 2.

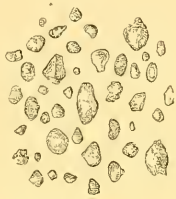
A beautiful example of oxalate of lime calculus, the surface of which is of a pale brown colour, and the tubercles small and delicate. p. 411.

Fig. 3.



Mulberry calculus which was of a rich plum colour. p. 411.

Fig. 4.

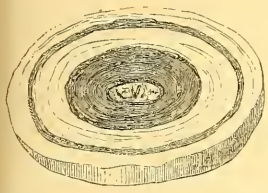


Small prostatic calculi. p. 415.

Fig. 5.

Large mulberry calculus, two-thirds the real size. p. 411.

Fig. 6.

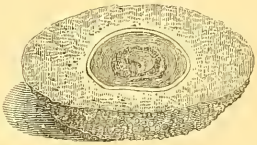


Phosphatic calculus. The composition of the central portion is different to that of the body of the nucleus. p. 413.

Fig. 7.

Blood calculus from one of the infundibula of the kidney. p. 409.

Fig. 9.

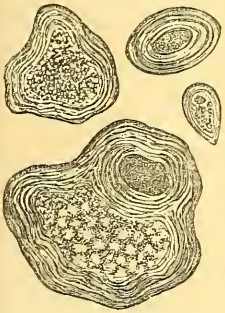


Phosphatic calculus. The nucleus being composed of a small uric acid calculus p. 413.

Fig. 8.

One large and two small black blood calculi, found in the pelvis of the kidney. p. 409.

Fig. 10.



Small phosphatic calculi, from the kidney. The nuclei are composed of a soft granular material, probably consisting of disintegrated epithelium. p. 413. × 130.

Fig. 11.

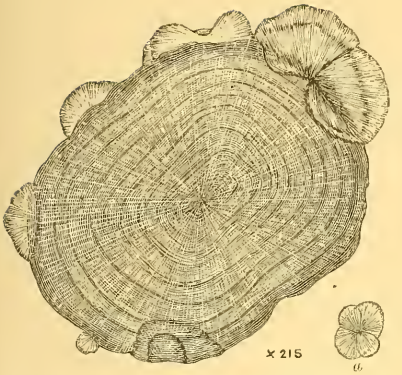
Very small calculi, from the follicles of the prostate gland of a man aged 40, who died of pneumonia of three weeks' duration. The structure of the bladder and prostate seemed perfectly healthy. *a*, calculi composed of a number of smaller ones; *b*, very small calculus containing a single granular cell in the interior; *c*, calculi composed of a collection of cells around which the hard material has been deposited; *d*, calculus in which the nucleus seems to be crystalline; *e*, epithelium from the ducts of the prostate. p. 417. × 215.

$\frac{1}{1000}$ of an inch |——| × 215.

[To face page 417.

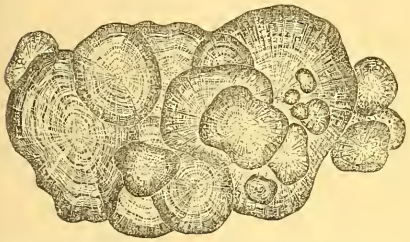
URINARY CALCULI.

Fig. 12.



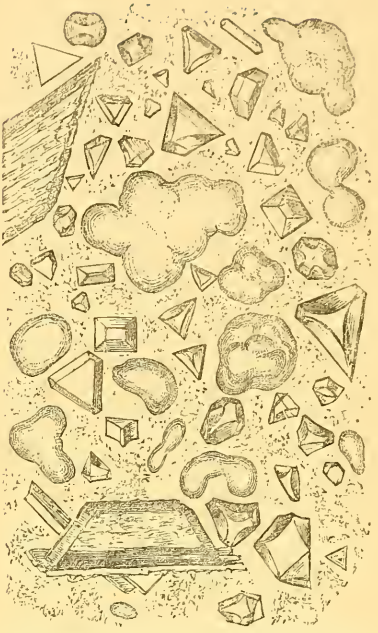
Small compound oxalate of lime calculus, found in the urine of a young man who was passing numerous dumb-bells of oxalate of lime and crystals of uric acid. Around the surface numerous large dumb-bells of oxalate of lime are seen partly incorporated with the mass. pp. 410, 420. × 215.

Fig. 13.



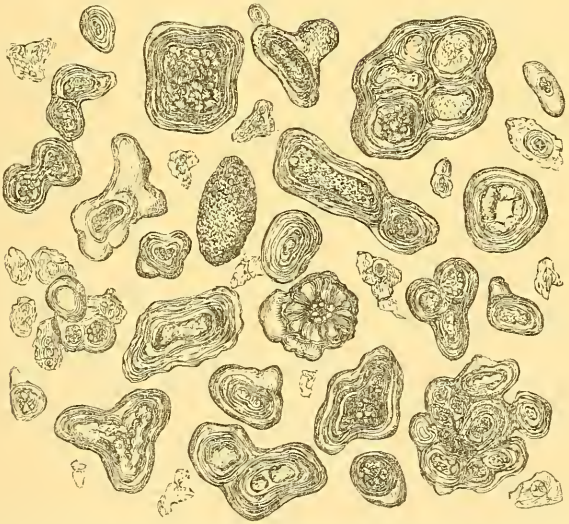
Compound oxalate of lime calculus, from the same case as that shown in Fig. 12. pp. 410, 420. × 130.

Fig. 14.



Urinary deposit, consisting of crystals of triple phosphate and numerous smooth and irregularly shaped microscopic oxalate of lime calculi. From a patient suffering from symptoms of renal calculus. Sent by Dr. Cotton. p. 420. × 215.

Fig. 15.



The same calculi as shown in Fig. 14, after being treated with acetic acid, dried and mounted in Canada balsam. The nuclei and concentric layers of each individual calculus have been rendered beautifully distinct. p. 420. × 215.

$\frac{1}{1000}$ of an inch ⌊___⌋ × 215.

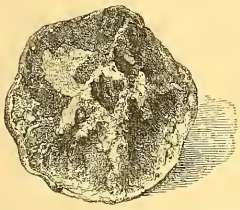
[To face page 420.

URINARY CALCULI.

Fig. 16.

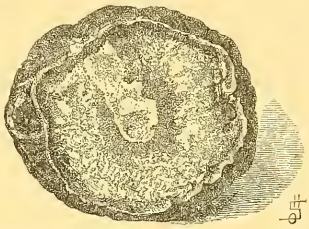
A calculus in which spontaneous fracture has occurred in the internal layers only, the separated portion appears to have become again cemented, and encrusted with a subsequent deposit. After Mr. Southam. p. 434.

Fig. 17.



Urethral portion of a calculus, removed by Mr. Southam, from a boy, aged 15. p. 434.

Fig. 18.

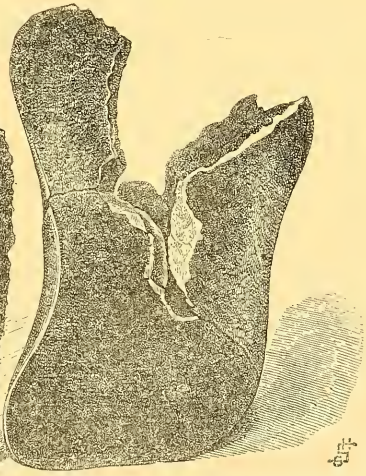


Larger fragment of the same stone, which was in the bladder. The separation was not of recent date. p. 434

Fig. 19.

Large soft wedge shaped stone, having one rounded surface and two facets, removed by lithotomy, by Mr. Luke. After Mr. Southam. p. 434.

Fig. 20.



Another stone from the same patient, with corresponding facets to those upon the stone represented in Fig. 19.

[To face page 434.

NEW WORKS BY THE SAME AUTHOR.

THE PHYSIOLOGICAL ANATOMY & PHYSIOLOGY OF MAN.

By ROBERT B. TODD, WILLIAM BOWMAN, & LIONEL S. BEALE,
Fellows of the Royal Society.

Being a New Edition, by Dr. BEALE, of Vol. I. of the original Work of Messrs. TODD and BOWMAN. Part I., with Plates, now ready, 7*s.* 6*d.* Part II., *nearly ready.*

LONGMANS AND CO.

Cloth, 8*vo.*, 16*s.*

CLINICAL LECTURES,

By the late ROBERT B. TODD, M.D., F.R.S., formerly Physician to King's College Hospital, and Professor of Physiology and of General and Morbid Anatomy in King's College, London.

Second Edition. Edited by Dr. BEALE.

Now ready, third thousand, 16*s.*

THE USE OF THE MICROSCOPE IN MEDICINE.

FOR PRACTITIONERS AND STUDENTS.

3rd Edition.

This work contains 58 Plates, containing many new Figures, now published for the first time.

Now ready, 25*s.*

KIDNEY DISEASES, URINARY DEPOSITS, AND CALCULOUS DISORDERS;

3rd Edition.

Uniform with "The Microscope in its Application to Practical Medicine."

SEPARATELY,

The Plates, containing 415 *Figures, carefully copied from nature* .. 12*s.*
The Text, pp. 500 .. .. 15*s.*

THE ARCHIVES OF MEDICINE.

A Record of Practical Observations and Anatomical and Chemical Researches connected with the Observation and Treatment of Disease. Edited by Dr. BEALE.

Vols. I., II., III., and IV. Vols. I. and II., 15*s.* each; III., 11*s.*; and IV., 13*s.* Subscription for four numbers, constituting a volume, 10*s.*

All Communications and Subscriptions to be addressed to the Editor, King's College, London.

JOHN CHURCHILL AND SONS.

All these Works contain the results of the Author's original investigations. They are illustrated with upwards of 2,000 new Engravings, all carefully copied from the actual objects, and most of which have been drawn on wood by the Author himself.

Just Published,

I.—ON THE STRUCTURE AND FORMATION OF CERTAIN NERVOUS CENTRES,

Tending to prove that the Cells and Fibres of every Nervous Apparatus form an uninterrupted Circuit.

Quarto, 8 Plates, containing 46 Figures, 5*s.*

II.—INDICATIONS OF THE PATHS TAKEN BY THE NERVE CURRENTS

As they traverse the Caudate Nerve Cells of the Cord and Encephalon.

One Plate and 4 Figures, 1*s.* 6*d.*

Preparing for Publication, uniform with "Kidney Diseases, Urinary Deposits, and Calculous Disorders," and the "Microscope in Medicine,"

THE DISEASES OF THE LIVER AND THEIR TREATMENT.

Including the Anatomy of the Organ in Man and Vertebrate Animals. With upwards of 50 Plates of original Drawings, being a second edition of the Author's Work on the Liver.

CONTENTS.

Preparing,

NEW RESEARCHES ON INFLAMMATION & FEVER,

Including Observations on Cattle Plague and on Cholera. With numerous Plates.

JOHN CHURCHILL AND SONS.

All these Works contain the results of the Author's original investigations. They are illustrated with upwards of 2,000 *new Engravings, all carefully copied from the actual objects, and most of which have been drawn on wood by the Author himself.*

KING'S COLLEGE, LONDON.

ANATOMY, DESCRIPTIVE AND SURGICAL...	Professor, RICH. PARTRIDGE, F.R.S. Demonstrator, J. WOOD, F.R.C.S. Assistant Demonstrators, GEORGE AMSDEN. J. B. PERRIN. URBAN PRITCHARD.
PHYSIOLOGY: GENERAL AND MORBID ANATOMY	Professor, LIONEL S. BEALE, M.B., F.R.S.
CHEMISTRY	Professor, W. A. MILLER, M.D., LL.D., Treas. R.S. Demonstrator, J. T. BOTTOMLEY, M.A.
MEDICINE, PRINCIPLES AND PRACTICE OF	Professor, GEORGE JOHNSON, M.D.
SURGERY, PRINCIPLES AND PRACTICE OF	Professor, SIR WILLIAM FERGUSSON, Bart., F.R.S.
BOTANY	Professor, ROBERT BENTLEY, F.L.S.
MATERIA MEDICA AND THERAPEUTICS ...	Professor, A. B. GARROD, M.D., F.R.S.
OBSTETRIC MEDICINE, AND THE DISEASES OF WOMEN AND CHILDREN	Professor, W. O. PRIESTLEY, M.D.
FORENSIC MEDICINE	Professor, W. A. GUY, M.B., F.R.S.
PRACTICAL CHEMISTRY	Professor, C. L. BLOXAM, F.C.S.
COMPARATIVE ANATOMY	Professor, T. RYMER JONES, F.R.S.
DENTAL SURGERY	Professor, SAMUEL CARTWRIGHT, F.R.C.S.
OPHTHALMOLOGY	Professor, J. SOELBERG WELLS, M.D., M.R.C.S.
Dean - - - - - - - -	PROFESSOR BENTLEY, F.L.S.

LECTURES AND DEMONSTRATIONS DELIVERED BY DR. LIONEL S. BEALE.

PHYSIOLOGY AND GENERAL AND MORBID ANATOMY.

These Lectures are delivered at King's College on Mondays, Wednesdays, and Fridays, at Four o'clock, from October to March. Four microscopical preparations are passed round the Class at each Lecture, so that during the course every pupil has an opportunity of examining about 300 microscopical specimens. The method of preparing microscopical specimens, the process of injection, and the mode of submitting tissues to microscopical examination, are also described.

FEE, £7 7*s.*; PERPETUAL, £10 10*s.*

LECTURES ON MORBID ANATOMY

Are given during the Summer Session twice a week. These Lectures are also illustrated with microscopical specimens.

FEE, £2 2*s.*

CLINICAL INSTRUCTION, CLINICAL LECTURES, AND DEMONSTRATIONS.

The fees for Practice and Clinical Lectures at King's College Hospital are as follows.

Perpetual Admission to the Medical and Surgical Practice.

For Matriculated Students	£31 10 0
For those not Matriculated	36 15 0

Medical Practice:—		*Surgical Practice:—*	
Three Months.....	£6 6 0	Three Months.....	£10 10 0
Six Months	10 10 0	Six Months	15 15 0
Eighteen Months	15 15 0	Twelve or Twenty-one Months	21 0 0
Perpetual	21 0 0	Perpetual...	26 5 0

*** For further information see Prospectus of the Medical Department, and the Calendar, or apply at the Secretary's Office, King's College, between the hours of 11 and 4 o'Clock.

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.

London, New Burlington Street,
January, 1870.

MESSRS. CHURCHILL & SONS'

Publications,

IN

MEDICINE

AND THE VARIOUS BRANCHES OF

NATURAL SCIENCE.

"It would be unjust to conclude this notice without saying a few words in favour of Mr. Churchill, from whom the profession is receiving, it may be truly said, the most beautiful series of Illustrated Medical Works which has ever been published."—*Lancet.*

"All the publications of Mr. Churchill are prepared with so much taste and neatness, that it is superfluous to speak of them in terms of commendation."—*Edinburgh Medical and Surgical Journal.*

"No one is more distinguished for the elegance and *recherché* style of his publications than Mr. Churchill."—*Provincial Medical Journal.*

"The name of Churchill has long been a guarantee for the excellence of illustrated works, and it would be superfluous to repeat the admiration that we have several times expressed in this respect, of the spirit with which this firm engages in these costly but valuable series."—*Medical Press and Circular.*

"The typography, illustrations, and getting up are, in all Mr. Churchill's publications, most beautiful."—*Monthly Journal of Medical Science.*

"Mr. Churchill's illustrated works are among the best that emanate from the Medical Press."—*Medical Times.*

"We have before called the attention of both students and practitioners to the great advantage which Mr. Churchill has conferred on the profession, in the issue, at such a moderate cost, of works so highly creditable in point of artistic execution and scientific merit."—*Dublin Quarterly Journal.*

A CLASSIFIED INDEX

TO

MESSRS. CHURCHILL & SONS' CATALOGUE.

ANATOMY.

CHEMISTRY.

CLIMATE.

DEFORMITIES, &c.

GENERATIVE ORGANS, Diseases of, and SYPHILIS.

HYGIENE.

MATERIA MEDICA and PHARMACY.

MATERIA MEDICA and PHARMACY—*continued.*

MEDICINE.

MEDICINE—*continued.*

MICROSCOPE.

MISCELLANEOUS.

NERVOUS DISORDERS AND INDIGESTION.

OBSTETRICS.

OPHTHALMOLOGY.

PHYSIOLOGY.

PSYCHOLOGY.

PULMONARY and CHEST DISEASES, &c.

RENAL and URINARY DISEASES.

SCIENCE.

MR. ACTON, M.R.C.S.

I.

A PRACTICAL TREATISE ON DISEASES OF THE URINARY AND GENERATIVE ORGANS IN BOTH SEXES. Third Edition. 8vo. cloth, £1. 1*s*. With Plates, £1. 11*s*. 6*d*. The Plates alone, limp cloth, 10*s*. 6*d*.

II.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS IN CHILDHOOD, YOUTH, ADULT AGE, AND ADVANCED LIFE, considered in their Physiological, Social, and Moral Relations. Fourth Edition. 8vo. cloth, 10*s*. 6*d*.

III.

PROSTITUTION: Considered in its Moral, Social, and Sanitary Aspects, Second Edition, enlarged. 8vo. cloth, 12*s*.

DR. ADAMS, A.M.

A TREATISE ON RHEUMATIC GOUT; OR, CHRONIC RHEUMATIC ARTHRITIS. 8vo. cloth, with a Quarto Atlas of Plates, 21*s*.

MR. WILLIAM ADAMS, F.R.C.S.

I.

ON THE PATHOLOGY AND TREATMENT OF LATERAL AND OTHER FORMS OF CURVATURE OF THE SPINE. With Plates. 8vo. cloth, 10*s*. 6*d*.

II.

CLUBFOOT: its Causes, Pathology, and Treatment. Jacksonian Prize Essay for 1864. With 100 Engravings. 8vo. cloth, 12*s*.

III.

ON THE REPARATIVE PROCESS IN HUMAN TENDONS AFTER SUBCUTANEOUS DIVISION FOR THE CURE OF DEFORMITIES. With Plates. 8vo. cloth, 6*s*.

IV.

SKETCH OF THE PRINCIPLES AND PRACTICE OF SUBCUTANEOUS SURGERY. 8vo. cloth, 2*s*. 6*d*.

DR. WILLIAM ADDISON, F.R.S.

I.

CELL THERAPEUTICS. 8vo. cloth, 4*s*.

II.

ON HEALTHY AND DISEASED STRUCTURE, AND THE TRUE PRINCIPLES OF TREATMENT FOR THE CURE OF DISEASE, ESPECIALLY CONSUMPTION AND SCROFULA, founded on MICROSCOPICAL ANALYSIS. 8vo. cloth, 12*s*.

DR. ALDIS.

AN INTRODUCTION TO HOSPITAL PRACTICE IN VARIOUS COMPLAINTS; with Remarks on their Pathology and Treatment. 8vo. cloth, 5*s*. 6*d*.

DR. SOMERVILLE SCOTT ALISON, M.D.EDIN., F.R.C.P.

THE PHYSICAL EXAMINATION OF THE CHEST IN PULMONARY CONSUMPTION, AND ITS INTERCURRENT DISEASES. With Engravings. 8vo. cloth, 12*s*.

DR. ALTHAUS, M.D., M.R.C.P.

ON EPILEPSY, HYSTERIA, AND ATAXY. Cr. 8vo. cloth, 4*s*.

THE ANATOMICAL REMEMBRANCER; OR, COMPLETE POCKET ANATOMIST. Sixth Edition, carefully Revised. 32mo. cloth, 3*s*. 6*d*.

DR. McCALL ANDERSON, M.D.

I.

THE PARASITIC AFFECTIONS OF THE SKIN. Second Edition. With Engravings. 8vo. cloth, 7*s*. 6*d*.

II.

ECZEMA. Second Edition. 8vo. cloth, 6*s*.

III.

PSORIASIS AND LEPRA. With Chromo-lithograph. 8vo. cloth, 5*s*.

DR. ANDREW ANDERSON, M.D.

TEN LECTURES INTRODUCTORY TO THE STUDY OF FEVER. Post 8vo. cloth, 5*s*.

DR. ARLIDGE.

ON THE STATE OF LUNACY AND THE LEGAL PROVISION FOR THE INSANE; with Observations on the Construction and Organisation of Asylums. 8vo. cloth, 7*s*.

DR. ALEXANDER ARMSTRONG, R.N.

OBSERVATIONS ON NAVAL HYGIENE AND SCURVY. More particularly as the latter appeared during a Polar Voyage. 8vo. cloth, 5*s*.

MR. T. J. ASHTON.

I.

ON THE DISEASES, INJURIES, AND MALFORMATIONS OF THE RECTUM AND ANUS. Fourth Edition. 8vo. cloth, 8*s*.

II.

PROLAPSUS, FISTULA IN ANO, AND HÆMORRHOIDAL AFFECTIONS; their Pathology and Treatment. Second Edition. Post 8vo. cloth 2*s*. 6*d*.

MR. THOS. J. AUSTIN, M.R.C.S.ENG.

A PRACTICAL ACCOUNT OF GENERAL PARALYSIS; Its Mental and Physical Symptoms, Statistics, Causes, Seat, and Treatment. 8vo. cloth, 6*s*.

DR. THOMAS BALLARD, M.D.

A NEW AND RATIONAL EXPLANATION OF THE DISEASES PECULIAR TO INFANTS AND MOTHERS; with obvious Suggestions for their Prevention and Cure. Post 8vo. cloth, 4*s*. 6*d*.

DR. BARCLAY.

I.

A MANUAL OF MEDICAL DIAGNOSIS. Second Edition. Foolscap 8vo. cloth, 8*s.* 6*d.*

II.

MEDICAL ERRORS.—Fallacies connected with the Application of the Inductive Method of Reasoning to the Science of Medicine. Post 8vo. cloth, 5*s.*

III.

GOUT AND RHEUMATISM IN RELATION TO DISEASE OF THE HEART. Post 8vo. cloth, 5*s.*

DR. BARLOW.

A MANUAL OF THE PRACTICE OF MEDICINE. Second Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. BARNES, M.D., F.R.C.P.

LECTURES ON OBSTETRIC OPERATIONS, INCLUDING THE TREATMENT OF HÆMORRHAGE, and forming a Guide to the Management of Difficult Labour. With nearly 100 Engravings. 8vo. cloth, 15*s.*

DR. BASCOME.

A HISTORY OF EPIDEMIC PESTILENCES, FROM THE EARLIEST AGES. 8vo. cloth, 8*s.*

DR. BASHAM.

ON DROPSY, AND ITS CONNECTION WITH DISEASES OF THE KIDNEYS, HEART, LUNGS AND LIVER. With 16 Plates. Third Edition. 8vo. cloth, 12*s.* 6*d.*

MR. H. F. BAXTER, M.R.C.S.L.

ON ORGANIC POLARITY; showing a Connexion to exist between Organic Forces and Ordinary Polar Forces. Crown 8vo. cloth, 5*s.*

MR. LIONEL J. BEALE, M.R.C.S.

THE LAWS OF HEALTH IN THEIR RELATIONS TO MIND AND BODY. A Series of Letters from an Old Practitioner to a Patient. Post 8vo. cloth, 7*s.* 6*d.*

DR. BEALE, F.R.S.

I.

ON KIDNEY DISEASES, URINARY DEPOSITS, AND CALCULOUS DISORDERS. Third Edition, much Enlarged. With 70 Plates. 8vo. cloth, 25*s.*

II.

THE MICROSCOPE, IN ITS APPLICATION TO PRACTICAL MEDICINE. Third Edition. With 58 Plates. 8vo. cloth, 16*s.*

III.

PROTOPLASM; OR, LIFE, FORCE, AND MATTER. Second Edition. With 8 Plates. Crown 8vo. cloth, 6*s.* 6*d.*

MR. BEASLEY.

I.

THE BOOK OF PRESCRIPTIONS; containing 3000 Prescriptions. Collected from the Practice of the most eminent Physicians and Surgeons, English and Foreign. Third Edition. 18mo. cloth, 6*s*.

II.

THE DRUGGIST'S GENERAL RECEIPT-BOOK: comprising a copious Veterinary Formulary and Table of Veterinary Materia Medica; Patent and Proprietary Medicines, Druggists' Nostrums, &c.; Perfumery, Skin Cosmetics, Hair Cosmetics, and Teeth Cosmetics; Beverages, Dietetic Articles, and Condiments; Trade Chemicals, Miscellaneous Preparations and Compounds used in the Arts, &c.; with useful Memoranda and Tables. Sixth Edition. 18mo. cloth, 6*s*.

III.

THE POCKET FORMULARY AND SYNOPSIS OF THE BRITISH AND FOREIGN PHARMACOPŒIAS; comprising standard and approved Formulæ for the Preparations and Compounds employed in Medical Practice. Eighth Edition, corrected and enlarged. 18mo. cloth, 6*s*.

DR. HENRY BENNET.

I.

A PRACTICAL TREATISE ON UTERINE DISEASES. Fourth Edition, revised, with Additions. 8vo. cloth, 16*s*.

II.

WINTER AND SPRING ON THE SHORES OF THE MEDITERRANEAN: OR, THE RIVIERA, MENTONE, ITALY, CORSICA, SICILY, ALGERIA, SPAIN, AND BIARRITZ, AS WINTER CLIMATES. Fourth Edition, with numerous Plates, Maps, and Wood Engravings. Post 8vo. cloth, 12*s*.

PROFESSOR BENTLEY, F.L.S.

A MANUAL OF BOTANY. With nearly 1,200 Engravings on Wood. Fcap. 8vo. cloth, 12*s*. 6*d*.

DR. BERNAYS.

NOTES FOR STUDENTS IN CHEMISTRY; being a Syllabus compiled from the Manuals of Miller, Fownes, Berzelius, Gerhardt, Gorup-Besanez, &c. Fourth Edition. Fcap. 8vo. cloth, 3*s*.

MR. HENRY HEATHER BIGG.

ORTHOPRAXY: a complete Guide to the Modern Treatment of Deformities by Mechanical Appliances. With 300 Engravings. Second Edition. Post 8vo. cloth, 10*s*.

DR. S. B. BIRCH, M.D., M.R.C.P.

I.

OXYGEN: ITS ACTION, USE, AND VALUE IN THE TREATMENT OF VARIOUS DISEASES OTHERWISE INCURABLE OR VERY INTRACTABLE. Second Edition. Post 8vo. cloth, 3*s*. 6*d*.

II.

CONSTIPATED BOWELS: the Various Causes and the Different Means of Cure. Third Edition. Post 8vo. cloth, 3*s*. 6*d*.

DR. GOLDING BIRD, F.R.S.

URINARY DEPOSITS; THEIR DIAGNOSIS, PATHOLOGY, AND THERAPEUTICAL INDICATIONS. With Engravings. Fifth Edition. Edited by E. Lloyd Birkett, M.D. Post 8vo. cloth, 10*s.* 6*d.*

MR. BISHOP, F.R.S.

I.

ON DEFORMITIES OF THE HUMAN BODY, their Pathology and Treatment. With Engravings on Wood. 8vo. cloth, 10*s.*

II.

ON ARTICULATE SOUNDS, AND ON THE CAUSES AND CURE OF IMPEDIMENTS OF SPEECH. 8vo. cloth, 4*s.*

MR. BLAINE.

OUTLINES OF THE VETERINARY ART; OR, A TREATISE ON THE ANATOMY, PHYSIOLOGY, AND DISEASES OF THE HORSE, NEAT CATTLE, AND SHEEP. Seventh Edition. By Charles Steel, M.R.C.V.S.L. With Plates. 8vo. cloth, 18*s.*

MR. BLOXAM.

I.

CHEMISTRY, INORGANIC AND ORGANIC; with Experiments and a Comparison of Equivalent and Molecular Formulæ. With 276 Engravings on Wood. 8vo. cloth, 16*s.*

II.

LABORATORY TEACHING; OR PROGRESSIVE EXERCISES IN PRACTICAL CHEMISTRY. With 89 Engravings. Crown, 8vo. cloth, 5*s.* 6*d.*

DR. BOURGUIGNON.

ON THE CATTLE PLAGUE; OR, CONTAGIOUS TYPHUS IN HORNED CATTLE: its History, Origin, Description, and Treatment. Post 8vo. 5*s.*

MR. JOHN E. BOWMAN, & MR. C. L. BLOXAM.

I.

PRACTICAL CHEMISTRY, including Analysis. With numerous Illustrations on Wood. Fifth Edition. Foolscap 8vo. cloth, 6*s.* 6*d.*

II.

MEDICAL CHEMISTRY; with Illustrations on Wood. Fourth Edition, carefully revised. Fcap. 8vo. cloth, 6*s.* 6*d.*

DR. BRAIDWOOD, M.D. EDIN.

ON PYÆMIA, OR SUPPURATIVE FEVER: the Astley Cooper Prize Essay for 1868. With 12 Plates. 8vo. cloth, 10*s.* 6*d.*

DR. JAMES BRIGHT.

ON DISEASES OF THE HEART, LUNGS, & AIR PASSAGES; with a Review of the several Climates recommended in these Affections. Third Edition. Post 8vo. cloth, 9*s.*

DR. BRINTON, F.R.S.

I.

THE DISEASES OF THE STOMACH, with an Introduction on its Anatomy and Physiology; being Lectures delivered at St. Thomas's Hospital. Second Edition. 8vo. cloth, 10*s.* 6*d.*

II.

INTESTINAL OBSTRUCTION. Edited by DR. BUZZARD. Post 8vo. cloth, 5*s.*

MR. BERNARD E. BRODHURST, F.R.C.S.

I.

CURVATURES OF THE SPINE: their Causes, Symptoms, Pathology, and Treatment. Second Edition. Roy. 8vo. cloth, with Engravings, 7*s.* 6*d.*

II.

ON THE NATURE AND TREATMENT OF CLUBFOOT AND ANALOGOUS DISTORTIONS involving the TIBIO-TARSAL ARTICULATION. With Engravings on Wood. 8vo. cloth, 4*s.* 6*d.*

III.

PRACTICAL OBSERVATIONS ON THE DISEASES OF THE JOINTS INVOLVING ANCHYLOSIS, and on the TREATMENT for the RESTORATION of MOTION. Third Edition, much enlarged, 8vo. cloth, 4*s.* 6*d.*

MR BROOKE, M.A., M.B., F.R.S.

ELEMENTS OF NATURAL PHILOSOPHY. Based on the Work of the late Dr. Golding Bird. Sixth Edition. With 700 Engravings. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. T. L. BRUNTON, B.SC., M.B.

ON DIGITALIS. With some Observations on the Urine. Fcap. 8vo. cloth, 4*s.* 6*d.*

MR. THOMAS BRYANT, F.R.C.S.

I.

ON THE DISEASES AND INJURIES OF THE JOINTS. CLINICAL AND PATHOLOGICAL OBSERVATIONS. Post 8vo. cloth, 7*s.* 6*d.*

II.

CLINICAL SURGERY. Parts I. to VII. 8vo., 3*s.* 6*d.* each.

DR. BUCKLE, M.D., L.R.C.P.LOND.

VITAL AND ECONOMICAL STATISTICS OF THE HOSPITALS, INFIRMARIES, &c., OF ENGLAND AND WALES. Royal 8vo. 5*s.*

DR. JOHN CHARLES BUCKNILL, F.R.S., & DR. DANIEL H. TUKE.

A MANUAL OF PSYCHOLOGICAL MEDICINE: containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity. Second Edition. 8vo. cloth, 15*s.*

DR. BUDD, F.R.S.

I.

ON DISEASES OF THE LIVER.

Illustrated with Coloured Plates and Engravings on Wood. Third Edition. 8vo. cloth, 16*s.*

II.

ON THE ORGANIC DISEASES AND FUNCTIONAL DISORDERS OF THE STOMACH. 8vo. cloth, 9*s.*

MR. CALLENDER, F.R.C.S.

FEMORAL RUPTURE: Anatomy of the Parts concerned. With Plates. 8vo. cloth, 4*s.*

DR. JOHN M. CAMPLIN, F.L.S.

ON DIABETES, AND ITS SUCCESSFUL TREATMENT. Third Edition, by Dr. Glover. Fcap. 8vo. cloth, 3*s.* 6*d.*

MR. ROBERT B. CARTER, M.R.C.S.

I.

ON THE INFLUENCE OF EDUCATION AND TRAINING IN PREVENTING DISEASES OF THE NERVOUS SYSTEM. Fcap. 8vo., 6*s.*

II.

THE PATHOLOGY AND TREATMENT OF HYSTERIA. Post 8vo. cloth, 4*s.* 6*d.*

DR. CARPENTER, F.R.S.

I.

PRINCIPLES OF HUMAN PHYSIOLOGY. With nearly 300 Illustrations on Steel and Wood. Seventh Edition. Edited by Mr. HENRY POWER. 8vo. cloth, 28*s.*

II.

A MANUAL OF PHYSIOLOGY. With 252 Illustrations on Steel and Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

III.

THE MICROSCOPE AND ITS REVELATIONS. With more than 400 Engravings on Steel and Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

MR. JOSEPH PEEL CATLOW, M.R.C.S.

ON THE PRINCIPLES OF ÆSTHETIC MEDICINE; or the Natural Use of Sensation and Desire in the Maintenance of Health and the Treatment of Disease. 8vo. cloth, 9*s.*

DR. CHAMBERS.

I.

LECTURES, CHIEFLY CLINICAL. Fourth Edition. 8vo. cloth, 14*s.*

II.

THE INDIGESTIONS OR DISEASES OF THE DIGESTIVE ORGANS FUNCTIONALLY TREATED. Second Edition. 8vo. cloth, 10*s.* 6*d.*

III.

SOME OF THE EFFECTS OF THE CLIMATE OF ITALY. Crown 8vo. cloth, 4*s.* 6*d.*

DR. CHANCE, M.B.

VIRCHOW'S CELLULAR PATHOLOGY, AS BASED UPON PHYSIOLOGICAL AND PATHOLOGICAL HISTOLOGY. With 144 Engravings on Wood. 8vo. cloth, 16*s.*

MR. H. T. CHAPMAN, F.R.C.S.

I.

THE TREATMENT OF OBSTINATE ULCERS AND CUTANEOUS ERUPTIONS OF THE LEG WITHOUT CONFINEMENT. Third Edition. Post 8vo. cloth, 3*s.* 6*d.*

II.

VARICOSE VEINS: their Nature, Consequences, and Treatment, Palliative and Curative. Second Edition. Post 8vo. cloth, 3*s.* 6*d.*

MR. PYE HENRY CHAVASSE, F.R.C.S.

I.

ADVICE TO A MOTHER ON THE MANAGEMENT OF HER CHILDREN. Ninth Edition. Foolscap 8vo., 2*s.* 6*d.*

II.

COUNSEL TO A MOTHER: being a Continuation and the Completion of "Advice to a Mother." Fcap. 8vo. 2*s.* 6*d.*

III.

ADVICE TO A WIFE ON THE MANAGEMENT OF HER OWN HEALTH. With an Introductory Chapter, especially addressed to a Young Wife. Eighth Edition. Fcap. 8vo., 2*s.* 6*d.*

MR. LE GROS CLARK, F.R.C.S.

I.

LECTURES ON THE PRINCIPLES OF SURGICAL DIAGNOSIS: ESPECIALLY IN RELATION TO SHOCK AND VISCERAL LESIONS. Delivered at the Royal College of Surgeons. 8vo. cloth, 10*s.* 6*d.*

II.

OUTLINES OF SURGERY; being an Epitome of the Lectures on the Principles and the Practice of Surgery delivered at St. Thomas's Hospital. Fcap. 8vo. cloth, 5*s.*

MR. JOHN CLAY, M.R.C.S.

KIWISCH ON DISEASES OF THE OVARIES: Translated, by permission, from the last German Edition of his Clinical Lectures on the Special Pathology and Treatment of the Diseases of Women. With Notes, and an Appendix on the Operation of Ovariotomy. Royal 12mo. cloth, 16*s.*

DR. COCKLE, M.D.

ON INTRA-THORACIC CANCER. 8vo. 6*s.* 6*d.*

MR. COLLIS, M.B.DUB., F.R.C.S.I.

THE DIAGNOSIS AND TREATMENT OF CANCER AND THE TUMOURS ANALOGOUS TO IT. With coloured Plates. 8vo. cloth, 14*s.*

MR. COOLEY.

COMPREHENSIVE SUPPLEMENT TO THE PHARMACOPŒIAS.

THE CYCLOPÆDIA OF PRACTICAL RECEIPTS, PROCESSES, AND COLLATERAL INFORMATION IN THE ARTS, MANUFACTURES, PROFESSIONS. AND TRADES, INCLUDING MEDICINE, PHARMACY, AND DOMESTIC ECONOMY; designed as a General Book of Reference for the Manufacturer, Tradesman, Amateur, and Heads of Families. Fourth and greatly enlarged Edition, 8vo. cloth. 28*s.*

MR. W. WHITE COOPER.

I.

ON WOUNDS AND INJURIES OF THE EYE. Illustrated by 17 Coloured Figures and 41 Woodcuts. 8vo. cloth, 12*s.*

II.

ON NEAR SIGHT, AGED SIGHT, IMPAIRED VISION, AND THE MEANS OF ASSISTING SIGHT. With 31 Illustrations on Wood. Second Edition. Fcap. 8vo. cloth, 7*s.* 6*d.*

SIR ASTLEY COOPER, BART., F.R.S.

ON THE STRUCTURE AND DISEASES OF THE TESTIS. With 24 Plates. Second Edition. Royal 4to., 20*s.*

MR. COOPER.

A DICTIONARY OF PRACTICAL SURGERY AND ENCYCLOPÆDIA OF SURGICAL SCIENCE. New Edition, brought down to the present time. By SAMUEL A. LANE, F.R.C.S., assisted by various eminent Surgeons. Vol. I., 8vo. cloth, £1. 5*s*.

MR. HOLMES COOTE, F.R.C.S.

A REPORT ON SOME IMPORTANT POINTS IN THE TREATMENT OF SYPHILIS. 8vo. cloth, 5*s*.

DR. COTTON, M.D., F.R.C.P.

PHTHISIS AND THE STETHOSCOPE; OR, THE PHYSICAL SIGNS OF CONSUMPTION. Fourth Edition. Foolscap 8vo. cloth, 3*s*. 6*d*.

MR. COULSON.

ON DISEASES OF THE BLADDER AND PROSTATE GLAND. New Edition, revised. *In Preparation.*

MR. WALTER COULSON, F.R.C.S.

I.

A TREATISE ON SYPHILIS. 8vo. cloth, 10*s*.

II.

STONE IN THE BLADDER: Its Prevention, Early Symptoms, and Treatment by Lithotrity. 8vo. cloth, 6*s*.

MR. CURLING, F.R.S.

I.

OBSERVATIONS ON DISEASES OF THE RECTUM. Third Edition. 8vo. cloth, 7*s*. 6*d*.

II.

A PRACTICAL TREATISE ON DISEASES OF THE TESTIS, SPERMATIC CORD, AND SCROTUM. Third Edition, with Engravings. 8vo. cloth, 16*s*.

DR. WILLIAM DALE, M.D.LOND.

A COMPENDIUM OF PRACTICAL MEDICINE AND MORBID ANATOMY. With Plates, 12mo. cloth, 7*s*.

DR. DALRYMPLE, M.R.C.P., F.R.C.S.

THE CLIMATE OF EGYPT: METEOROLOGICAL AND MEDICAL OBSERVATIONS, with Practical Hints for Invalid Travellers. Post 8vo. cloth, 4*s*.

MR. JOHN DALRYMPLE, F.R.S., F.R.C.S.

PATHOLOGY OF THE HUMAN EYE. Complete in Nine Fasciculi: imperial 4to., 20*s*. each; half-bound morocco, gilt tops, 9*l*. 15*s*.

DR. HERBERT DAVIES.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART. Second Edition. Post 8vo. cloth, 8*s*.

DR. DAVEY.

I.

THE GANGLIONIC NERVOUS SYSTEM: its Structure, Functions, and Diseases. 8vo. cloth, 9*s*.

II.

ON THE NATURE AND PROXIMATE CAUSE OF INSANITY. Post 8vo. cloth, 3*s*.

DR. HENRY DAY, M.D., M.R.C.P.

CLINICAL HISTORIES; with Comments. 8vo. cloth, 7*s.* 6*d.*

MR. DIXON.

A GUIDE TO THE PRACTICAL STUDY OF DISEASES OF THE EYE. Third Edition. Post 8vo. cloth, 9*s.*

DR. DOBELL.

I.

DEMONSTRATIONS OF DISEASES IN THE CHEST, AND THEIR PHYSICAL DIAGNOSIS. With Coloured Plates. 8vo. cloth, 12*s.* 6*d.*

II.

LECTURES ON THE GERMS AND VESTIGES OF DISEASE, and on the Prevention of the Invasion and Fatality of Disease by Periodical Examinations. 8vo. cloth, 6*s.* 6*d.*

III.

ON TUBERCULOSIS: ITS NATURE, CAUSE, AND TREATMENT; with Notes on Pancreatic Juice. Second Edition. Crown 8vo. cloth, 3*s.* 6*d.*

IV.

LECTURES ON WINTER COUGH (CATARRH, BRONCHITIS, EMPHYSEMA, ASTHMA); with an Appendix on some Principles of Diet in Disease. Post 8vo. cloth, 5*s.* 6*d.*

V.

LECTURES ON THE TRUE FIRST STAGE OF CONSUMPTION. Crown 8vo. cloth, 3*s.* 6*d.*

DR. TOOGOOD DOWNING.

NEURALGIA: its various Forms, Pathology, and Treatment. THE JACKSONIAN PRIZE ESSAY FOR 1850. 8vo. cloth, 10*s.* 6*d.*

DR. DRUITT, F.R.C.S.

THE SURGEON'S VADE-MECUM; with numerous Engravings on Wood. Ninth Edition. Foolscap 8vo. cloth, 12*s.* 6*d.*

MR. ERNEST EDWARDS, B.A.

PHOTOGRAPHS OF EMINENT MEDICAL MEN, with brief Analytical Notices of their Works. Vols. I. and II. (24 Portraits), 4to. cloth, 24*s.* each.

DR. ELAM, M.D.

MEDICINE, DISEASE, AND DEATH: being an Enquiry into the Progress of Medicine as a Practical Art. 8vo. cloth, 3*s.* 6*d.*

DR. EDWARD ELLIS, M.D.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN. With a Formulary. Crown 8vo. cloth, 6*s.*

SIR JAMES EYRE, M.D.

I.

THE STOMACH AND ITS DIFFICULTIES. Sixth Edition, by Mr. BEALE. Fcap. 8vo., 2*s.* 6*d.*

II.

PRACTICAL REMARKS ON SOME EXHAUSTING DISEASES. Second Edition. Post 8vo. cloth, 4*s.* 6*d.*

DR. FAYRER, M.D., F.R.C.S., C.S.I.

CLINICAL SURGERY IN INDIA. With Engravings. 8vo. cloth, 16*s.*

DR. FENWICK.

I.

THE MORBID STATES OF THE STOMACH AND DUODENUM, AND THEIR RELATIONS TO THE DISEASES OF OTHER ORGANS. With 10 Plates. 8vo. cloth, 12*s.*

II.

THE STUDENT'S GUIDE TO MEDICAL DIAGNOSIS. With 41 Engravings. Fcap. 8vo. cloth, 5*s.* 6*d.*

SIR WILLIAM FERGUSSON, BART., F.R.S.

I.

A SYSTEM OF PRACTICAL SURGERY; with numerous Illustrations on Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY. With numerous Engravings. 8vo. cloth, 10*s.* 6*d.*

SIR JOHN FIFE, F.R.C.S. AND MR. URQUHART.

MANUAL OF THE TURKISH BATH. Heat a Mode of Cure and a Source of Strength for Men and Animals. With Engravings. Post 8vo. cloth, 5*s.*

MR. FLOWER, F.R.S., F.R.C.S.

DIAGRAMS OF THE NERVES OF THE HUMAN BODY, exhibiting their Origin, Divisions, and Connexions, with their Distribution to the various Regions of the Cutaneous Surface, and to all the Muscles. Folio, containing Six Plates, 14*s.*

MR. FLUX.

THE LAW TO REGULATE THE SALE OF POISONS WITHIN GREAT BRITAIN. Crown 8vo. cloth, 2*s.* 6*d.*

MR. FOWNES, PH.D., F.R.S.

I.

A MANUAL OF CHEMISTRY; with 187 Illustrations on Wood. Tenth Edition. Fcap. 8vo. cloth, 14*s.*
Edited by H. Bence Jones, M.D., F.R.S., and Henry Watts, B.A., F.R.S.

II.

CHEMISTRY, AS EXEMPLIFYING THE WISDOM AND BENEFICENCE OF GOD. Second Edition. Fcap. 8vo. cloth, 4*s.* 6*d.*

III.

INTRODUCTION TO QUALITATIVE ANALYSIS. Post 8vo. cloth, 2*s.*

DR. D. J. T. FRANCIS.

CHANGE OF CLIMATE; considered as a Remedy in Dyspeptic, Pulmonary, and other Chronic Affections; with an Account of the most Eligible Places of Residence for Invalids, at different Seasons of the Year. Post 8vo. cloth, 8*s.* 6*d.*

DR. FULLER.

I.

ON DISEASES OF THE LUNGS AND AIR PASSAGES. Second Edition. 8vo. cloth, 12*s.* 6*d.*

II.

ON DISEASES OF THE HEART AND GREAT VESSELS. 8vo. cloth, 7*s.* 6*d.*

III.

ON RHEUMATISM, RHEUMATIC GOUT, AND SCIATICA: their Pathology, Symptoms, and Treatment. Third Edition. 8vo. cloth, 12*s.* 6*d.*

PROFESSOR FRESENIUS.

A SYSTEM OF INSTRUCTION IN CHEMICAL ANALYSIS, Edited by ARTHUR VACHER.

QUALITATIVE. Seventh Edition. 8vo. cloth, 9*s.*

QUANTITATIVE. Fifth Edition. 8vo. cloth.

MR. GALLOWAY.

I.

THE FIRST STEP IN CHEMISTRY. With numerous Engravings. Fourth Edition. Fcap. 8vo. cloth, 6*s.* 6*d.*

II.

A KEY TO THE EXERCISES CONTAINED IN ABOVE. Fcap. 8vo., 2*s.* 6*d.*

III.

THE SECOND STEP IN CHEMISTRY; or, the Student's Guide to the Higher Branches of the Science. With Engravings. 8vo. cloth, 10*s.*

IV.

A MANUAL OF QUALITATIVE ANALYSIS. Fifth Edition. With Engravings. Post 8vo. cloth, 8*s.* 6*d.*

V.

CHEMICAL TABLES. On Five Large Sheets, for School and Lecture Rooms. Second Edition. 4*s.* 6*d.*

MR. J. SAMPSON GAMGEE.

HISTORY OF A SUCCESSFUL CASE OF AMPUTATION AT THE HIP-JOINT (the limb 48-in. in circumference, 99 pounds weight). With 4 Photographs. 4to cloth, 10*s.* 6*d.*

MR. F. J. GANT, F.R.C.S.

I.

THE PRINCIPLES OF SURGERY: Clinical, Medical, and Operative. With Engravings. 8vo. cloth, 18*s.*

II.

THE IRRITABLE BLADDER: its Causes and Curative Treatment. Second Edition, enlarged. Crown 8vo. cloth, 5*s.*

MR. GAY, F.R.C.S.

ON VARICOSE DISEASE OF THE LOWER EXTREMITIES. LETTSOMIAN LECTURES. With Plates. 8vo. cloth, 5*s.*

SIR DUNCAN GIBB, BART., M.D.

I.

ON DISEASES OF THE THROAT AND WINDPIPE, as reflected by the Laryngoscope. Second Edition. With 116 Engravings. Post 8vo. cloth, 10*s.* 6*d.*

II.

THE LARYNGOSCOPE IN DISEASES OF THE THROAT, with a Chapter on RHINOSCOPY. Third Edition, with Engravings. Crown 8vo., cloth, 5*s.*

DR. GORDON, M.D., C.B.

I.

ARMY HYGIENE. 8vo. cloth, 20*s.*

II.

CHINA, FROM A MEDICAL POINT OF VIEW; IN 1860 AND 1861; With a Chapter on Nagasaki as a Sanatarium. 8vo. cloth, 10*s.* 6*d.*

DR. GAIRDNER.

ON GOUT; its History, its Causes, and its Cure. Fourth Edition. Post 8vo. cloth, 8*s.* 6*d.*

DR. GRABHAM, M.D., M.R.C.P.

THE CLIMATE AND RESOURCES OF MADEIRA, as regarding chiefly the Necessities of Consumption and the Welfare of Invalids. With Map and Engravings. Crown 8vo. cloth, 5*s.*

DR. GRAVES M.D., F.R.S.

STUDIES IN PHYSIOLOGY AND MEDICINE. Edited by Dr. Stokes. With Portrait and Memoir. 8vo. cloth, 14*s.*

MR. GRIFFITHS.

CHEMISTRY OF THE FOUR SEASONS—Spring, Summer, Autumn, Winter. Illustrated with Engravings on Wood. Second Edition. Foolscap 8vo. cloth, 7*s.* 6*d.*

DR. GULLY.

THE SIMPLE TREATMENT OF DISEASE; deduced from the Methods of Expectancy and Revulsion. 18mo. cloth, 4*s.*

DR. GUY AND DR. JOHN HARLEY.

HOOPER'S PHYSICIAN'S VADE-MECUM; OR, MANUAL OF THE PRINCIPLES AND PRACTICE OF PHYSIC. Seventh Edition. With Engravings. Foolscap 8vo. cloth, 12*s.* 6*d.*

GUY'S HOSPITAL REPORTS. Third Series. Vol. XV., 8vo. 7*s,* 6*d.*

DR. HABERSHON, F.R.C.P.

I.

ON DISEASES OF THE ABDOMEN, comprising those of the Stomach and other Parts of the Alimentary Canal, Œsophagus, Stomach, Cæcum, Intestines, and Peritoneum. Second Edition, with Plates. 8vo. cloth, 14*s.*

II.

ON THE INJURIOUS EFFECTS OF MERCURY IN THE TREATMENT OF DISEASE. Post 8vo. cloth, 3*s.* 6*d.*

DR. C. RADCLYFFE HALL.

TORQUAY IN ITS MEDICAL ASPECT AS A RESORT FOR PULMONARY INVALIDS. Post 8vo. cloth, 5*s.*

DR. MARSHALL HALL, F.R.S.

I.

PRONE AND POSTURAL RESPIRATION IN DROWNING AND OTHER FORMS OF APNŒA OR SUSPENDED RESPIRATION. Post 8vo. cloth. 5*s.*

II.

PRACTICAL OBSERVATIONS AND SUGGESTIONS IN MEDICINE. Second Series. Post 8vo. cloth, 8*s.* 6*d.*

MR. HARDWICH.

A MANUAL OF PHOTOGRAPHIC CHEMISTRY. With Engravings. Seventh Edition. Foolscap 8vo. cloth, 7*s.* 6*d.*

DR. J. BOWER HARRISON, M.D., M.R.C.P.

I.

LETTERS TO A YOUNG PRACTITIONER ON THE DISEASES OF CHILDREN. Foolscap 8vo. cloth, 3*s.*

II.

ON THE CONTAMINATION OF WATER BY THE POISON OF LEAD, and its Effects on the Human Body. Foolscap 8vo. cloth, 3*s.* 6*d.*

DR. HARTWIG.

I.

ON SEA BATHING AND SEA AIR. Second Edition. Fcap. 8vo., 2*s.* 6*d.*

II.

ON THE PHYSICAL EDUCATION OF CHILDREN. Fcap. 8vo., 2*s.* 6*d.*

DR. A. H. HASSALL.

THE URINE, IN HEALTH AND DISEASE; being an Explanation of the Composition of the Urine, and of the Pathology and Treatment of Urinary and Renal Disorders. Second Edition. With 79 Engravings (23 Coloured). Post 8vo. cloth, 12*s.* 6*d.*

MR. ALFRED HAVILAND, M.R.C.S.

CLIMATE, WEATHER, AND DISEASE; being a Sketch of the Opinions of the most celebrated Ancient and Modern Writers with regard to the Influence of Climate and Weather in producing Disease. With Four coloured Engravings. 8vo. cloth, 7*s.*

MR. W. HAYCOCK, M.R.C.V.S.

HORSES; HOW THEY OUGHT TO BE SHOD: being a plain and practical Treatise on the Principles and Practice of the Farrier's Art. With 14 Plates. Cloth, 7*s.* 6*d.*

DR. HEADLAND, M.D., F.R.C.P.

I.

ON THE ACTION OF MEDICINES IN THE SYSTEM. Fourth Edition. 8vo. cloth, 14*s.*

II.

A MEDICAL HANDBOOK; comprehending such Information on Medical and Sanitary Subjects as is desirable in Educated Persons. Second Thousand. Foolscap 8vo. cloth, 5*s.*

DR. HEALE.

I.

A TREATISE ON THE PHYSIOLOGICAL ANATOMY OF THE LUNGS. With Engravings. 8vo. cloth, 8*s.*

II.

A TREATISE ON VITAL CAUSES. 8vo. cloth, 9*s.*

MR. CHRISTOPHER HEATH, F.R.C.S.

I.

PRACTICAL ANATOMY: a Manual of Dissections. With numerous Engravings. Second Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

A MANUAL OF MINOR SURGERY AND BANDAGING, FOR THE USE OF HOUSE-SURGEONS, DRESSERS, AND JUNIOR PRACTITIONERS. With Illustrations. Third Edition. Fcap. 8vo. cloth, 5*s.*

III.

INJURIES AND DISEASES OF THE JAWS. Jacksonian Prize Essay. With Engravings. 8vo. cloth, 12*s.*

MR. HIGGINBOTTOM, F.R.S., F.R.C.S.E.

A PRACTICAL ESSAY ON THE USE OF THE NITRATE OF SILVER IN THE TREATMENT OF INFLAMMATION, WOUNDS, AND ULCERS. Third Edition, 8vo. cloth, 6*s.*

DR. HINDS.

THE HARMONIES OF PHYSICAL SCIENCE IN RELATION TO THE HIGHER SENTIMENTS; with Observations on Medical Studies, and on the Moral and Scientific Relations of Medical Life. Post 8vo. cloth, 4*s.*

MR. J. A. HINGESTON, M.R.C.S.

TOPICS OF THE DAY, MEDICAL, SOCIAL, AND SCIENTIFIC. Crown 8vo. cloth, 7*s.* 6*d.*

DR. HODGES.

THE NATURE, PATHOLOGY, AND TREATMENT OF PUERPERAL CONVULSIONS. Crown 8vo. cloth, 3s.

DR. DECIMUS HODGSON.

THE PROSTATE GLAND, AND ITS ENLARGEMENT IN OLD AGE. With 12 Plates. Royal 8vo. cloth, 6*s.*

MR. JABEZ HOGG.

A MANUAL OF OPHTHALMOSCOPIC SURGERY; being a Practical Treatise on the Use of the Ophthalmoscope in Diseases of the Eye. Third Edition. With Coloured Plates. 8vo. cloth, 10*s.* 6*d.*

MR. LUTHER HOLDEN, F.R.C.S.

I.

HUMAN OSTEOLOGY: with Plates, showing the Attachments of the Muscles. Fourth Edition. 8vo. cloth, 16*s.*

II.

A MANUAL OF THE DISSECTION OF THE HUMAN BODY. With Engravings on Wood. Third Edition. 8vo. cloth, 16*s.*

MR. BARNARD HOLT, F.R.C.S.

ON THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA. Third Edition, Enlarged. 8vo. cloth, 6*s.*

SIR CHARLES HOOD, M.D.

SUGGESTIONS FOR THE FUTURE PROVISION OF CRIMINAL LUNATICS. 8vo. cloth, 5*s.* 6*d.*

DR. P. HOOD.

THE SUCCESSFUL TREATMENT OF SCARLET FEVER; also, OBSERVATIONS ON THE PATHOLOGY AND TREATMENT OF CROWING INSPIRATIONS OF INFANTS. Post 8vo. cloth, 5*s.*

MR. JOHN HORSLEY.

A CATECHISM OF CHEMICAL PHILOSOPHY; being a Familiar Exposition of the Principles of Chemistry and Physics. With Engravings on Wood. Designed for the Use of Schools and Private Teachers. Post 8vo. cloth, 6*s.* 6*d.*

DR. JAMES A. HORTON, M.D.

PHYSICAL AND MEDICAL CLIMATE AND METEOROLOGY OF THE WEST COAST OF AFRICA. 8vo. cloth, 10*s.*

MR. LUKE HOWARD, F.R.S.

ESSAY ON THE MODIFICATIONS OF CLOUDS. Third Edition, by W. D. and E. HOWARD. With 6 Lithographic Plates, from Pictures by Kenyon. 4to. cloth, 10*s.* 6*d.*

DR. HAMILTON HOWE, M.D.

A THEORETICAL INQUIRY INTO THE PHYSICAL CAUSE OF EPIDEMIC DISEASES. Accompanied with Tables. 8vo. cloth, 7*s.*

DR. HUFELAND.

THE ART OF PROLONGING LIFE. Second Edition. Edited by ERASMUS WILSON, F.R.S. Foolscap 8vo., 2*s.* 6*d.*

MR. W. CURTIS HUGMAN, F.R.C.S.

ON HIP-JOINT DISEASE; with reference especially to Treatment by Mechanical Means for the Relief of Contraction and Deformity of the Affected Limb. With Plates. Re-issue, enlarged. 8vo. cloth, 3*s.* 6*d.*

MR. HULKE, F.R.C.S.

A PRACTICAL TREATISE ON THE USE OF THE OPHTHALMOSCOPE. Being the Jacksonian Prize Essay for 1859. Royal 8vo. cloth, 8*s.*

DR. HENRY HUNT.

ON HEARTBURN AND INDIGESTION. 8vo. cloth, 5*s.*

MR. G. Y. HUNTER, M.R.C.S.

BODY AND MIND: the Nervous System and its Derangements. Fcap. 8vo. cloth, 3*s.* 6*d.*

MR. JONATHAN HUTCHINSON, F.R.C.S.

A CLINICAL MEMOIR ON CERTAIN DISEASES OF THE EYE AND EAR, CONSEQUENT ON INHERITED SYPHILIS; with an appended Chapter of Commentaries on the Transmission of Syphilis from Parent to Offspring, and its more remote Consequences. With Plates and Woodcuts, 8vo. cloth, 9*s*.

PROF. HUXLEY, LL.D., F.R.S.

INTRODUCTION TO THE CLASSIFICATION OF ANIMALS. With Engravings. 8vo. cloth, 6*s*.

DR. INMAN, M.R.C.P.

I.

ON MYALGIA: ITS NATURE, CAUSES, AND TREATMENT; being a Treatise on Painful and other Affections of the Muscular System. Second Edition. 8vo. cloth, 9*s*.

II.

FOUNDATION FOR A NEW THEORY AND PRACTICE OF MEDICINE. Second Edition. Crown 8vo. cloth, 10*s*.

DR. JAGO, M.D.OXON., A.B.CANTAB.

ENTOPTICS, WITH ITS USES IN PHYSIOLOGY AND MEDICINE. With 54 Engravings. Crown 8vo. cloth, 5*s*.

DR. PROSSER JAMES, M.D.

SORE-THROAT: ITS NATURE, VARIETIES, AND TREATMENT; including the Use of the LARYNGOSCOPE as an Aid to Diagnosis. Second Edition, with numerous Engravings. Post 8vo. cloth, 5*s*.

DR. JENCKEN, M.D., M.R.C.P.

THE CHOLERA: ITS ORIGIN, IDIOSYNCRACY, AND TREATMENT. Fcap. 8vo. cloth, 2*s*. 6*d*.

DR. HANDFIELD JONES, M.B., F.R.C.P.

CLINICAL OBSERVATIONS ON FUNCTIONAL NERVOUS DISORDERS. Post 8vo. cloth, 10*s*. 6*d*.

DR. H. BENCE JONES, M.D., F.R.S.

I.

LECTURES ON SOME OF THE APPLICATIONS OF CHEMISTRY AND MECHANICS TO PATHOLOGY AND THERAPEUTICS. 8vo. cloth, 12*s*.

II.

CROONIAN LECTURES ON MATTER AND FORCE. Fcap. 8vo. cloth, 5*s*.

DR. HANDFIELD JONES, F.R.S., & DR. EDWARD H. SIEVEKING.

A MANUAL OF PATHOLOGICAL ANATOMY. Illustrated with numerous Engravings on Wood. Foolscap 8vo. cloth, 12*s*. 6*d*.

DR. JAMES JONES, M.D., M.R.C.P.

ON THE USE OF PERCHLORIDE OF IRON AND OTHER CHALYBEATE SALTS IN THE TREATMENT OF CONSUMPTION. Crown 8vo. cloth, 3*s.* 6*d.*

MR. WHARTON JONES, F.R.S.

I.

A MANUAL OF THE PRINCIPLES AND PRACTICE OF OPHTHALMIC MEDICINE AND SURGERY; with Nine Coloured Plates and 173 Wood Engravings. Third Edition, thoroughly revised. Foolscap 8vo. cloth, 12*s.* 6*d.*

II.

THE WISDOM AND BENEFICENCE OF THE ALMIGHTY, AS DISPLAYED IN THE SENSE OF VISION. Actonian Prize Essay. With Illustrations on Steel and Wood. Foolscap 8vo. cloth, 4*s.* 6*d.*

III.

DEFECTS OF SIGHT AND HEARING: their Nature, Causes, Prevention, and General Management. Second Edition, with Engravings. Fcap. 8vo. 2*s.* 6*d.*

IV.

A CATECHISM OF THE MEDICINE AND SURGERY OF THE EYE AND EAR. For the Clinical Use of Hospital Students. Fcap. 8vo. 2*s.* 6*d.*

V.

A CATECHISM OF THE PHYSIOLOGY AND PHILOSOPHY OF BODY, SENSE, AND MIND. For Use in Schools and Colleges. Fcap. 8vo., 2*s.* 6*d.*

DR. LAENNEC.

A MANUAL OF AUSCULTATION AND PERCUSSION. Translated and Edited by J. B. SHARPE, M.R.C.S. 3*s.*

DR. LANE, M.A.

HYDROPATHY; OR, HYGIENIC MEDICINE. An Explanatory Essay. Second Edition. Post 8vo. cloth, 5*s.*

SIR WM. LAWRENCE, BART., F.R.S.

I.

LECTURES ON SURGERY. 8vo. cloth, 16*s.*

II.

A TREATISE ON RUPTURES. The Fifth Edition, considerably enlarged. 8vo. cloth, 16*s.*

DR. LEARED, M.R.C.P.

IMPERFECT DIGESTION: ITS CAUSES AND TREATMENT. Fifth Edition. Foolscap 8vo. cloth, 4*s.* 6*d.*

MR. HENRY LEE, F.R.C.S.

I.

ON SYPHILIS. Second Edition. With Coloured Plates. 8vo. cloth, 10*s.*

II.

ON DISEASES OF THE VEINS, HÆMORRHOIDAL TUMOURS, AND OTHER AFFECTIONS OF THE RECTUM. Second Edition. 8vo. cloth, 8*s.*

DR. EDWIN LEE.

I.

THE EFFECT OF CLIMATE ON TUBERCULOUS DISEASE, with Notices of the chief Foreign Places of Winter Resort. Small 8vo. cloth, 4*s.* 6*d.*

II.

THE WATERING PLACES OF ENGLAND, CONSIDERED with Reference to their Medical Topography. Fourth Edition. Fcap. 8vo. cloth, 7*s.* 6*d.*

III.

THE BATHS OF FRANCE. Fourth Edition. Fcap. 8vo. cloth, 4*s.* 6*d.*

IV.

THE BATHS OF GERMANY. Fourth Edition. Post 8vo. cloth, 7*s.*

V.

THE BATHS OF SWITZERLAND. 12mo. cloth, 3*s.* 6*d.*

VI.

HOMŒOPATHY AND HYDROPATHY IMPARTIALLY APPRECIATED. Fourth Edition. Post 8vo. cloth, 3*s.*

DR. ROBERT LEE, F.R.S.

I.

CONSULTATIONS IN MIDWIFERY. Foolscap 8vo. cloth, 4*s.* 6*d.*

II.

A TREATISE ON THE SPECULUM; with Three Hundred Cases. 8vo. cloth, 4*s.* 6*d.*

III.

CLINICAL REPORTS OF OVARIAN AND UTERINE DISEASES, with Commentaries. Foolscap 8vo. cloth, 6*s.* 6*d.*

IV.

CLINICAL MIDWIFERY: comprising the Histories of 545 Cases of Difficult, Preternatural, and Complicated Labour, with Commentaries. Second Edition. Foolscap 8vo. cloth, 5*s.*

DR. LEISHMAN, M.D., F.F.P.S.

THE MECHANISM OF PARTURITION: An Essay, Historical and Critical. With Engravings. 8vo. cloth, 5*s.*

MR. F. HARWOOD LESCHER.

THE ELEMENTS OF PHARMACY. 8vo. cloth, 7*s.* 6*d.*

MR. LISTON, F.R.S.

PRACTICAL SURGERY. Fourth Edition. 8vo. cloth, 22*s.*

MR. H. W. LOBB, L.S.A., M.R.C.S.E.

ON SOME OF THE MORE OBSCURE FORMS OF NERVOUS AFFECTIONS, THEIR PATHOLOGY AND TREATMENT. Re-issue, with the Chapter on Galvanism entirely Re-written. With Engravings. 8vo. cloth, 8*s.*

DR. LOGAN, M.D., M.R.C.P.LOND.

ON OBSTINATE DISEASES OF THE SKIN. Fcap. 8vo. cloth, 2*s.* 6*d.*

LONDON HOSPITAL.

CLINICAL LECTURES AND REPORTS BY THE MEDICAL AND SURGICAL STAFF. With Illustrations. Vols. I. to IV. 8vo. cloth, 7*s.* 6*d.*

LONDON MEDICAL SOCIETY OF OBSERVATION.

WHAT TO OBSERVE AT THE BED-SIDE, AND AFTER DEATH. Published by Authority. Second Edition. Foolscap 8vo. cloth, 4*s.* 6*d.*

MR. HENRY LOWNDES, M.R.C.S.

AN ESSAY ON THE MAINTENANCE OF HEALTH. Fcap. 8vo. cloth, 2*s.* 6*d.*

MR. M'CLELLAND, F.L.S., F.G.S.

THE MEDICAL TOPOGRAPHY, OR CLIMATE AND SOILS, OF BENGAL AND THE N. W. PROVINCES. Post 8vo. cloth, 4*s.* 6*d.*

DR. MACLACHLAN, M.D., F.R.C.P.L.

THE DISEASES AND INFIRMITIES OF ADVANCED LIFE. 8vo. cloth, 16*s.*

DR. A. C. MACLEOD, M.R.C.P.LOND.

ACHOLIC DISEASES; comprising Jaundice, Diarrhœa, Dysentery, and Cholera. Post 8vo. cloth, 5*s.* 6*d.*

DR. GEORGE H. B. MACLEOD, F.R.C.S.E.

I.

OUTLINES OF SURGICAL DIAGNOSIS. 8vo. cloth, 12*s.* 6*d.*

II.

NOTES ON THE SURGERY OF THE CRIMEAN WAR; with REMARKS on GUN-SHOT WOUNDS. 8vo. cloth, 10*s.* 6*d.*

DR. WM. MACLEOD, F.R.C.P.EDIN.

THE THEORY OF THE TREATMENT OF DISEASE ADOPTED AT BEN RHYDDING. Fcap. 8vo. cloth, 2*s.* 6*d.*

MR. JOSEPH MACLISE, F.R.C.S.

I.

SURGICAL ANATOMY. A Series of Dissections, illustrating the Principal Regions of the Human Body. Second Edition, folio, cloth, £3. 12*s.*; half-morocco, £4. 4*s.*

II.

ON DISLOCATIONS AND FRACTURES. This Work is Uniform with "Surgical Anatomy;" folio, cloth, £2. 10*s.*; half-morocco, £2. 17*s.*

MR. MACNAMARA.

I.

A MANUAL OF THE DISEASES OF THE EYE. With Coloured Plates. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

A TREATISE ON ASIATIC CHOLERA; with Maps. 8vo. cloth, 16*s.*

DR. MC NICOLL, M.R.C.P.

A HAND-BOOK FOR SOUTHPORT, MEDICAL & GENERAL; with Copious Notices of the Natural History of the District. Second Edition. Post 8vo. cloth, 3*s.* 6*d.*

DR. MARCET, F.R.S.

ON CHRONIC ALCOHOLIC INTOXICATION; with an INQUIRY INTO THE INFLUENCE OF THE ABUSE OF ALCOHOL AS A PREDISPOSING CAUSE OF DISEASE. Second Edition, much enlarged. Foolscap 8vo. cloth, 4*s.* 6*d.*

DR. J. MACPHERSON, M.D.

CHOLERA IN ITS HOME; with a Sketch of the Pathology and Treatment of the Disease. Crown 8vo. cloth, 5*s.*

DR. MARKHAM.

I.

DISEASES OF THE HEART: THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT. Second Edition. Post 8vo. cloth, 6*s.*

II.

SKODA ON AUSCULTATION AND PERCUSSION. Post 8vo. cloth, 6*s.*

III.

BLEEDING AND CHANGE IN TYPE OF DISEASES. Gulstonian Lectures for 1864. Crown 8vo. 2*s.* 6*d.*

DR. ALEXANDER MARSDEN, M.D., F.R.C.S.

A NEW AND SUCCESSFUL MODE OF TREATING CERTAIN FORMS OF CANCER; to which is prefixed a Practical and Systematic Description of all the Varieties of this Disease. With Coloured Plates. 8vo. cloth, 6*s.* 6*d.*

SIR RANALD MARTIN, K.C.B., F.R.S.

INFLUENCE OF TROPICAL CLIMATES IN PRODUCING THE ACUTE ENDEMIC DISEASES OF EUROPEANS; including Practical Observations on their Chronic Sequelæ under the Influences of the Climate of Europe. Second Edition, much enlarged. 8vo. cloth, 20*s.*

DR. P. MARTYN, M.D.LOND.

HOOPING-COUGH; ITS PATHOLOGY AND TREATMENT. With Engravings. 8vo. cloth, 2*s.* 6*d.*

MR. C. F. MAUNDER, F.R.C.S.

OPERATIVE SURGERY. With 158 Engravings. Post 8vo. 6*s.*

DR. MAYNE, M.D., LL.D.

I.

AN EXPOSITORY LEXICON OF THE TERMS, ANCIENT AND MODERN, IN MEDICAL AND GENERAL SCIENCE. 8vo. cloth, £2. 10*s.*

II.

A MEDICAL VOCABULARY; or, an Explanation of all Names, Synonymes, Terms, and Phrases used in Medicine and the relative branches of Medical Science. Third Edition. Fcap. 8vo. cloth, 8*s.* 6*d.*

DR. MERYON, M.D., F.R.C.P.

PATHOLOGICAL AND PRACTICAL RESEARCHES ON THE VARIOUS FORMS OF PARALYSIS. 8vo. cloth, 6*s.*

DR. W. J. MOORE, M.D.

I.

HEALTH IN THE TROPICS; or, Sanitary Art applied to Europeans in India. 8vo. cloth, 9*s.*

II.

A MANUAL OF THE DISEASES OF INDIA. Fcap. 8vo. cloth, 5*s.*

DR. JAMES MORRIS, M.D.LOND.

I.

GERMINAL MATTER AND THE CONTACT THEORY: An Essay on the Morbid Poisons. Second Edition. Crown 8vo. cloth, 4*s.* 6*d.*

II.

IRRITABILITY: Popular and Practical Sketches of Common Morbid States and Conditions bordering on Disease; with Hints for Management, Alleviation, and Cure. Crown 8vo. cloth, 4*s.* 6*d.*

PROFESSOR MULDER, UTRECHT.

THE CHEMISTRY OF WINE. Edited by H. BENCE JONES, M.D., F.R.S. Fcap. 8vo. cloth, 6*s.*

DR. W. MURRAY, M.D., M.R.C.P.

EMOTIONAL DISORDERS OF THE SYMPATHETIC SYSTEM OF NERVES. Crown 8vo. cloth, 3*s.* 6*d.*

DR. MUSHET, M.B., M.R.C.P.

ON APOPLEXY, AND ALLIED AFFECTIONS OF THE BRAIN. 8vo. cloth, 7*s.*

MR. NAYLER, F.R.C.S.

ON THE DISEASES OF THE SKIN. With Plates. 8vo. cloth, 10*s.* 6*d.*

DR. BIRKBECK NEVINS.

THE PRESCRIBER'S ANALYSIS OF THE BRITISH PHARMACOPEIA of 1867. 32mo. cloth, 3*s.* 6*d.*

DR. THOS. NICHOLSON, M.D.

ON YELLOW FEVER; comprising the History of that Disease as it appeared in the Island of Antigua. Fcap. 8vo. cloth, 2*s.* 6*d.*

DR. NOAD, PH.D., F.R.S.

THE INDUCTION COIL, being a Popular Explanation of the Electrical Principles on which it is constructed. Third Edition. With Engravings. Fcap. 8vo. cloth, 3*s.*

DR. NOBLE.

THE HUMAN MIND IN ITS RELATIONS WITH THE BRAIN AND NERVOUS SYSTEM. Post 8vo. cloth, 4*s.* 6*d.*

MR. NUNNELEY, F.R.C.S.E.

I.

ON THE ORGANS OF VISION: THEIR ANATOMY AND PHYSIOLOGY. With Plates, 8vo. cloth, 15*s.*

II.

A TREATISE ON THE NATURE, CAUSES, AND TREATMENT OF ERYSIPELAS. 8vo. cloth, 10*s.* 6*d.*

DR. OPPERT, M.D.

I.

HOSPITALS, INFIRMARIES, AND DISPENSARIES; their Construction, Interior Arrangement, and Management, with Descriptions of existing Institutions. With 53 Engravings. Royal 8vo. cloth, 10*s.* 6*d.*

II.

VISCERAL AND HEREDITARY SYPHILIS. 8vo. cloth, 5*s.*

MR. LANGSTON PARKER.

THE MODERN TREATMENT OF SYPHILITIC DISEASES, both Primary and Secondary; comprising the Treatment of Constitutional and Confirmed Syphilis, by a safe and successful Method. Fourth Edition, 8vo. cloth, 10*s.*

DR. PARKES, F.R.S., F.R.C.P.

I.

A MANUAL OF PRACTICAL HYGIENE; intended especially for the Medical Officers of the Army. With Plates and Woodcuts. 3rd Edition, 8vo. cloth, 16s.

II.

THE URINE: ITS COMPOSITION IN HEALTH AND DISEASE, AND UNDER THE ACTION OF REMEDIES. 8vo. cloth, 12*s*.

DR. PARKIN, M.D., F.R.C.S.

I.

THE ANTIDOTAL TREATMENT AND PREVENTION OF THE EPIDEMIC CHOLERA. Third Edition. 8vo. cloth, 7*s*. 6*d*.

II.

THE CAUSATION AND PREVENTION OF DISEASE; with the Laws regulating the Extrication of Malaria from the Surface, and its Diffusion in the surrounding Air. 8vo. cloth, 5*s*.

MR. JAMES PART, F.R.C.S.

THE MEDICAL AND SURGICAL POCKET CASE BOOK, for the Registration of important Cases in Private Practice, and to assist the Student of Hospital Practice. Second Edition. 2*s*. 6*d*.

DR. PATTERSON, M.D.

EGYPT AND THE NILE AS A WINTER RESORT FOR PULMONARY AND OTHER INVALIDS. Fcap. 8vo. cloth, 3*s*.

DR. PAVY, M.D., F.R.S., F.R.C.P.

I.

DIABETES: RESEARCHES ON ITS NATURE AND TREATMENT. Second Edition. With Engravings. 8vo. cloth, 10*s*.

II.

DIGESTION: ITS DISORDERS AND THEIR TREATMENT. Second Edition. 8vo. cloth, 8*s*. 6*d*.

DR. PEACOCK, M.D., F.R.C.P.

I.

ON MALFORMATIONS OF THE HUMAN HEART. With Original Cases and Illustrations. Second Edition. With 8 Plates. 8vo. cloth, 10*s*.

II.

ON SOME OF THE CAUSES AND EFFECTS OF VALVULAR DISEASE OF THE HEART. With Engravings. 8vo. cloth, 5*s*.

DR W. H. PEARSE, M.D.EDIN.

NOTES ON HEALTH IN CALCUTTA AND BRITISH EMIGRANT SHIPS, including Ventilation, Diet, and Disease. Fcap. 8vo. 2*s*.

DR. PEREIRA, F.R.S.

SELECTA E PRÆSCRIPTIS. Fifteenth Edition. 24mo. cloth, 5*s*.

DR. PICKFORD.

HYGIENE; or, Health as Depending upon the Conditions of the Atmosphere, Food and Drinks, Motion and Rest, Sleep and Wakefulness, Secretions, Excretions, and Retentions, Mental Emotions, Clothing, Bathing, &c. Vol. I. 8vo. cloth, 9*s*.

PROFESSOR PIRRIE, F.R.S.E.

THE PRINCIPLES AND PRACTICE OF SURGERY. With numerous Engravings on Wood. Second Edition. 8vo. cloth, 24*s.*

PROFESSOR PIRRIE & DR. KEITH.

ACUPRESSURE: an excellent Method of arresting Surgical Hæmorrhage and of accelerating the healing of Wounds. With Engravings. 8vo. cloth, 5*s.*

DR. PIRRIE, M.D.

ON HAY ASTHMA, AND THE AFFECTION TERMED HAY FEVER. Fcap. 8vo. cloth, 2*s.* 6*d.*

PROFESSORS PLATTNER & MUSPRATT.

THE USE OF THE BLOWPIPE IN THE EXAMINATION OF MINERALS, ORES, AND OTHER METALLIC COMBINATIONS. Illustrated by numerous Engravings on Wood. Third Edition. 8vo. cloth, 10*s.* 6*d.*

MR. HENRY POWER, F.R.C.S., M.B.LOND.

ILLUSTRATIONS OF SOME OF THE PRINCIPAL DISEASES OF THE EYE: With an Account of their Symptoms, Pathology and Treatment. Twelve Coloured Plates. 8vo. cloth, 20*s.*

DR. HENRY F. A. PRATT, M.D., M.R.C.P.

I.

THE GENEALOGY OF CREATION, newly Translated from the Unpointed Hebrew Text of the Book of Genesis, showing the General Scientific Accuracy of the Cosmogony of Moses and the Philosophy of Creation. 8vo. cloth, 14*s.*

II.

ON ECCENTRIC AND CENTRIC FORCE: A New Theory of Projection. With Engravings. 8vo. cloth, 10*s.*

III.

ON ORBITAL MOTION: The Outlines of a System of Physical Astronomy. With Diagrams. 8vo. cloth, 7*s.* 6*d.*

IV.

ASTRONOMICAL INVESTIGATIONS. The Cosmical Relations of the Revolution of the Lunar Apsides. Oceanic Tides. With Engravings. 8vo. cloth, 5*s.*

V.

THE ORACLES OF GOD: An Attempt at a Re-interpretation. Part I. The Revealed Cosmos. 8vo. cloth, 10*s.*

THE PRESCRIBER'S PHARMACOPŒIA; containing all the Medicines in the British Pharmacopœia, arranged in Classes according to their Action, with their Composition and Doses. By a Practising Physician. Fifth Edition. 32mo. cloth, 2*s.* 6*d.*; roan tuck (for the pocket), 3*s.* 6*d.*

DR. JOHN ROWLISON PRETTY.

AIDS DURING LABOUR, including the Administration of Chloroform, the Management of Placenta and Post-partum Hæmorrhage. Fcap. 8vo. cloth, 4*s.* 6*d.*

MR. P. C. PRICE, F.R.C.S.

AN ESSAY ON EXCISION OF THE KNEE-JOINT. With Coloured Plates. With Memoir of the Author and Notes by Henry Smith, F.R.C.S. Royal 8vo. cloth, 14*s.*

MR. LAKE PRICE.

PHOTOGRAPHIC MANIPULATION: A Manual treating of the Practice of the Art, and its various Applications to Nature. With numerous Engravings. Second Edition. Crown 8vo. cloth, 6*s.* 6*d.*

DR. PRIESTLEY.

LECTURES ON THE DEVELOPMENT OF THE GRAVID UTERUS. 8vo. cloth, 5*s.* 6*d.*

MR. RAINEY.

ON THE MODE OF FORMATION OF SHELLS OF ANIMALS, OF BONE, AND OF SEVERAL OTHER STRUCTURES, by a Process of Molecular Coalescence, Demonstrable in certain Artificially-formed Products. Fcap. 8vo. cloth, 4*s.* 6*d.*

MR. ROBERT RAMSAY AND MR. J. OAKLEY COLES.

DEFORMITIES OF THE MOUTH, CONGENITAL AND ACCIDENTAL: Their Mechanical Treatment. With Illustrations. 8vo. cloth, 5*s.*

DR. F. H. RAMSBOTHAM.

THE PRINCIPLES AND PRACTICE OF OBSTETRIC MEDICINE AND SURGERY. Illustrated with One Hundred and Twenty Plates on Steel and Wood; forming one thick handsome volume. Fifth Edition. 8vo. cloth, 22*s.*

DR. READE, M.B.T.C.D., L.R.C.S.I.

SYPHILITIC AFFECTIONS OF THE NERVOUS SYSTEM,' AND A CASE OF SYMMETRICAL MUSCULAR ATROPHY; with other Contributions to the Pathology of the Spinal Marrow. Post 8vo. cloth, 5*s.*

PROFESSOR REDWOOD, PH. D.

A SUPPLEMENT TO THE PHARMACOPŒIA; A concise but comprehensive Dispensatory, and Manual of Facts and Formulæ, for the use of Practitioners in Medicine and Pharmacy. Third Edition. 8vo. cloth, 22*s.*

DR. DU BOIS REYMOND.

ANIMAL ELECTRICITY; Edited by H. Bence Jones, M.D., F.R.S. With Fifty Engravings on Wood. Foolscap 8vo. cloth, 6*s.*

DR. REYNOLDS, M.D.LOND., F.R.S.

I.

EPILEPSY: ITS SYMPTOMS, TREATMENT, AND RELATION TO OTHER CHRONIC CONVULSIVE DISEASES. 8vo. cloth, 10*s.*

II.

THE DIAGNOSIS OF DISEASES OF THE BRAIN, SPINAL CORD, AND THEIR APPENDAGES. 8vo. cloth, 8*s.*

DR. B. W. RICHARDSON, F.R.S.

ON THE CAUSE OF THE COAGULATION OF THE BLOOD. Being the Astley Cooper Prize Essay for 1856. With a Practical Appendix. 8vo. cloth, 16*s.*

DR. RITCHIE, M.D.

ON OVARIAN PHYSIOLOGY AND PATHOLOGY. With Engravings. 8vo. cloth, 6*s*.

DR. WILLIAM ROBERTS, M.D., F.R.C.P.

AN ESSAY ON WASTING PALSY; being a Systematic Treatise on the Disease hitherto described as ATROPHIE MUSCULAIRE PROGRESSIVE. With Four Plates. 8vo. cloth, 5*s*.

DR. ROUTH.

INFANT FEEDING, AND ITS INFLUENCE ON LIFE; Or, the Causes and Prevention of Infant Mortality. Second Edition. Fcap. 8vo. cloth, 6*s*.

DR. W. H. ROBERTSON.

I.

THE NATURE AND TREATMENT OF GOUT. 8vo. cloth, 10*s*. 6*d*.

II.

A TREATISE ON DIET AND REGIMEN. Fourth Edition. 2 vols. 12*s*. post 8vo. cloth.

DR. ROWE.

NERVOUS DISEASES, LIVER AND STOMACH COMPLAINTS, LOW SPIRITS, INDIGESTION, GOUT, ASTHMA, AND DISORDERS PRODUCED BY TROPICAL CLIMATES. With Cases. Sixteenth Edition. Fcap. 8vo. 2*s*. 6*d*.

DR. ROYLE, F.R.S., AND DR. HEADLAND, M.D.

A MANUAL OF MATERIA MEDICA AND THERAPEUTICS. With numerous Engravings on Wood. Fifth Edition. Fcap. 8vo. cloth, 12*s*. 6*d*.

DR. RYAN, M.D.

INFANTICIDE: ITS LAW, PREVALENCE, PREVENTION, AND HISTORY. 8vo. cloth, 5*s*.

ST. BARTHOLOMEW'S HOSPITAL.

A DESCRIPTIVE CATALOGUE OF THE ANATOMICAL MUSEUM. Vol. I. (1846), Vol. II. (1851), Vol. III. (1862), 8vo. cloth, 5*s*. each.

ST. GEORGE'S HOSPITAL REPORTS. Vols. I. to IV. 8vo. 7*s*. 6*d*.

MR. T. P. SALT, BIRMINGHAM.

ON DEFORMITIES AND DEBILITIES OF THE LOWER EXTREMITIES AND THE MECHANICAL TREATMENT EMPLOYED IN THE PROMOTION OF THEIR CURE. With Plates. 8vo. cloth, 15*s*.

DR. SALTER, F.R.S.

ASTHMA. Second Edition. 8vo. cloth, 10*s*.

DR. SANKEY, M.D.LOND.

LECTURES ON MENTAL DISEASES. 8vo. cloth, 8*s*.

DR. SANSOM, M.D.LOND.

I.

CHLOROFORM: ITS ACTION AND ADMINISTRATION. A Handbook. With Engravings. Crown 8vo. cloth, 5*s*.

II.

THE ARREST AND PREVENTION OF CHOLERA; being a Guide to the Antiseptic Treatment. Fcap. 8vo. cloth, 2*s*. 6*d*.

MR. SAVORY.

A COMPENDIUM OF DOMESTIC MEDICINE, AND COMPANION TO THE MEDICINE CHEST; intended as a Source of Easy Reference for Clergymen, and for Families residing at a Distance from Professional Assistance. Seventh Edition. 12mo. cloth, 5*s*.

DR. SCHACHT.

THE MICROSCOPE, AND ITS APPLICATION TO VEGETABLE ANATOMY AND PHYSIOLOGY. Edited by FREDERICK CURREY, M.A. Fcap. 8vo. cloth, 6*s*.

DR. SCORESBY-JACKSON, M.D., F.R.S.E.

MEDICAL CLIMATOLOGY; or, a Topographical and Meteorological Description of the Localities resorted to in Winter and Summer by Invalids of various classes both at Home and Abroad. With an Isothermal Chart. Post 8vo. cloth, 12*s*.

DR. SEMPLE.

ON COUGH: its Causes, Varieties, and Treatment. With some practical Remarks on the Use of the Stethoscope as an aid to Diagnosis. Post 8vo. cloth, 4*s*. 6*d*.

DR. SEYMOUR.

I.

ILLUSTRATIONS OF SOME OF THE PRINCIPAL DISEASES OF THE OVARIA: their Symptoms and Treatment; to which are prefixed Observations on the Structure and Functions of those parts in the Human Being and in Animals. On India paper. Folio, 16*s*.

II.

THE NATURE AND TREATMENT OF DROPSY; considered especially in reference to the Diseases of the Internal Organs of the Body, which most commonly produce it. 8vo. 5*s*.

DR. SHAPTER, M.D., F.R.C.P.

THE CLIMATE OF THE SOUTH OF DEVON, AND ITS INFLUENCE UPON HEALTH. Second Edition, with Maps. 8vo. cloth, 10*s*. 6*d*.

MR. SHAW, M.R.C.S.

THE MEDICAL REMEMBRANCER; OR, BOOK OF EMERGENCIES. Fifth Edition. Edited, with Additions, by JONATHAN HUTCHINSON, F.R.C.S. 32mo. cloth, 2*s*. 6*d*.

DR. SHEA, M.D., B.A.

A MANUAL OF ANIMAL PHYSIOLOGY With an Appendix of Questions for the B.A. London and other Examinations. With Engravings. Foolscap 8vo. cloth, 5*s*. 6*d*.

DR. SHRIMPTON.

CHOLERA: ITS SEAT, NATURE, AND TREATMENT. With Engravings. 8vo. cloth, 4*s*. 6*d*.

MR. U. J. KAY-SHUTTLEWORTH, M.P.

FIRST PRINCIPLES OF MODERN CHEMISTRY: a Manual of Inorganic Chemistry. Second Edition. Crown 8vo. cloth, 4*s*. 6*d*.

DR. SIBSON, F.R.S.

MEDICAL ANATOMY. With coloured Plates. Imperial folio. Complete in Seven Fasciculi. 5*s.* each.

DR. E. H. SIEVEKING.

ON EPILEPSY AND EPILEPTIFORM SEIZURES: their Causes, Pathology, and Treatment. Second Edition. Post 8vo. cloth, 10*s.* 6*d.*

DR. SIMMS.

A WINTER IN PARIS: being a few Experiences and Observations of French Medical and Sanitary Matters. Fcap. 8vo. cloth, 4*s.*

MR. SINCLAIR AND DR. JOHNSTON.

PRACTICAL MIDWIFERY: Comprising an Account of 13,748 Deliveries, which occurred in the Dublin Lying-in Hospital, during a period of Seven Years. 8vo. cloth, 10*s.*

DR. SIORDET, M.B.LOND., M.R.C.P.

MENTONE IN ITS MEDICAL ASPECT. Foolscap 8vo. cloth, 2*s.* 6*d.*

MR. ALFRED SMEE, F.R.S.

GENERAL DEBILITY AND DEFECTIVE NUTRITION; their Causes, Consequences, and Treatment. Second Edition. Fcap. 8vo. cloth, 3*s.* 6*d.*

DR. SMELLIE.

OBSTETRIC PLATES: being a Selection from the more Important and Practical Illustrations contained in the Original Work. With Anatomical and Practical Directions. 8vo. cloth, 5*s.*

MR. HENRY SMITH, F.R.C.S.

I.

ON STRICTURE OF THE URETHRA. 8vo. cloth, 7*s.* 6*d.*

II.

HÆMORRHOIDS AND PROLAPSUS OF THE RECTUM: Their Pathology and Treatment, with especial reference to the use of Nitric Acid. Third Edition. Fcap. 8vo. cloth, 3*s.*

III.

THE SURGERY OF THE RECTUM. Lettsomian Lectures. Second Edition. Fcap. 8vo. 3*s.* 6*d.*

DR. J. SMITH, M.D., F.R.C.S.EDIN.

HANDBOOK OF DENTAL ANATOMY AND SURGERY, FOR THE USE OF STUDENTS AND PRACTITIONERS. Fcap. 8vo. cloth, 3*s.* 6*d.*

DR. W. TYLER SMITH.

A MANUAL OF OBSTETRICS, THEORETICAL AND PRACTICAL. Illustrated with 186 Engravings. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. SNOW.

ON CHLOROFORM AND OTHER ANÆSTHETICS: THEIR ACTION AND ADMINISTRATION. Edited, with a Memoir of the Author, by Benjamin W. Richardson, M.D. 8vo. cloth, 10*s.* 6*d.*

MR. J. VOSE SOLOMON, F.R.C.S.

TENSION OF THE EYEBALL; GLAUCOMA: some Account of the Operations practised in the 19th Century. 8vo. cloth, 4*s.*

DR. STANHOPE TEMPLEMAN SPEER.

PATHOLOGICAL CHEMISTRY, IN ITS APPLICATION TO THE PRACTICE OF MEDICINE. Translated from the French of MM. BECQUEREL and RODIER. 8vo. cloth, reduced to 8*s*.

MR. J. K. SPENDER, M.D.LOND.

A MANUAL OF THE PATHOLOGY AND TREATMENT OF ULCERS AND CUTANEOUS DISEASES OF THE LOWER LIMBS. 8vo. cloth, 4*s*.

MR. PETER SQUIRE.

I.

A COMPANION TO THE BRITISH PHARMACOPÆIA. Seventh Edition. 8vo. cloth, 10*s*. 6*d*.

II.

THE PHARMACOPÆIAS OF THE LONDON HOSPITALS, arranged in Groups for easy Reference and Comparison. Second Edition. 18mo. cloth, 5*s*.

DR. STEGGALL.

I.

A MEDICAL MANUAL FOR APOTHECARIES' HALL AND OTHER MEDICAL BOARDS. Twelfth Edition. 12mo. cloth, 10*s*.

II.

A MANUAL FOR THE COLLEGE OF SURGEONS; intended for the Use of Candidates for Examination and Practitioners. Second Edition. 12mo. cloth, 10*s*.

III.

FIRST LINES FOR CHEMISTS AND DRUGGISTS PREPARING FOR EXAMINATION AT THE PHARMACEUTICAL SOCIETY. Third Edition. 18mo. cloth, 3*s*. 6*d*.

MR. STOWE, M.R.C.S.

A TOXICOLOGICAL CHART, exhibiting at one view the Symptoms, Treatment, and Mode of Detecting the various Poisons, Mineral, Vegetable, and Animal. To which are added, concise Directions for the Treatment of Suspended Animation. Twelfth Edition. revised. On Sheet, 2*s*.; mounted on Roller, 5*s*.

MR. FRANCIS SUTTON, F.C.S.

A SYSTEMATIC HANDBOOK OF VOLUMETRIC ANALYSIS; or, the Quantitative Estimation of Chemical Substances by Measure. With Engravings. Post 8vo. cloth, 7*s*. 6*d*.

MR. W. P. SWAIN, F.R.C.S.

INJURIES AND DISEASES OF THE KNEE-JOINT, and their Treatment by Amputation and Excision Contrasted. Jacksonian Prize Essay. With 36 Engravings. 8vo. cloth, 9*s*.

DR. SWAYNE.

OBSTETRIC APHORISMS FOR THE USE OF STUDENTS COMMENCING MIDWIFERY PRACTICE. With Engravings on Wood. Fourth Edition. Fcap. 8vo. cloth, 3*s*. 6*d*.

SIR ALEXANDER TAYLOR, M.D., F.R.S.E.

THE CLIMATE OF PAU; with a Description of the Watering Places of the Pyrenees, and of the Virtues of their respective Mineral Sources in Disease. Third Edition. Post 8vo. cloth, 7*s*.

DR. ALFRED S. TAYLOR, F.R.S.

I.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. With 176 Wood Engravings. 8vo. cloth, 28*s*.

II.

A MANUAL OF MEDICAL JURISPRUDENCE. Eighth Edition. With Engravings. Fcap. 8vo. cloth, 12*s*. 6*d*.

III.

ON POISONS, in relation to MEDICAL JURISPRUDENCE AND MEDICINE. Second Edition. Fcap. 8vo. cloth, 12*s*. 6*d*.

DR. THEOPHILUS THOMPSON, F.R.S.

CLINICAL LECTURES ON PULMONARY CONSUMPTION; with additional Chapters by E. Symes Thompson, M.D. With Plates. 8vo. cloth, 7*s*. 6*d*.

DR. THOMAS.

THE MODERN PRACTICE OF PHYSIC; exhibiting the Symptoms, Causes, Morbid Appearances, and Treatment of the Diseases of all Climates. Eleventh Edition. Revised by Algernon Frampton, M.D. 2 vols. 8vo. cloth, 28*s*.

SIR HENRY THOMPSON, F.R.C.S.

I.

STRICTURE OF THE URETHRA AND URINARY FISTULÆ; their Pathology and Treatment. Jacksonian Prize Essay. With Plates. Third Edition. 8vo. cloth, 10*s*.

II.

THE DISEASES OF THE PROSTATE; their Pathology and Treatment. With Plates. Third Edition. 8vo. cloth, 10*s*.

III.

PRACTICAL LITHOTOMY AND LITHOTRITY; or, An Inquiry into the best Modes of removing Stone from the Bladder. With numerous Engravings, 8vo. cloth, 9*s*.

IV.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. With Engravings. Second Edition. Crown 8vo. cloth, 5*s*.

DR. THOROWGOOD, M.D.LOND.

NOTES ON ASTHMA; its Nature, Forms and Treatment. Crown 8vo. cloth, 4*s*.

DR. THUDICHUM.

I.

A TREATISE ON THE PATHOLOGY OF THE URINE, Including a complete Guide to its Analysis. With Plates, 8vo. cloth, 14*s*.

II.

A TREATISE ON GALL STONES: their Chemistry, Pathology, and Treatment. With Coloured Plates. 8vo. cloth, 10*s*.

DR. TILT.

I.

ON UTERINE AND OVARIAN INFLAMMATION, AND ON THE PHYSIOLOGY AND DISEASES OF MENSTRUATION. Third Edition. 8vo. cloth, 12*s.*

II.

A HANDBOOK OF UTERINE THERAPEUTICS AND OF DISEASES OF WOMEN. Third Edition. Post 8vo. cloth, 10*s.*

III.

THE CHANGE OF LIFE IN HEALTH AND DISEASE: a Practical Treatise on the Nervous and other Affections incidental to Women at the Decline of Life. Second Edition. 8vo. cloth, 6*s.*

DR. GODWIN TIMMS.

CONSUMPTION: its True Nature and Successful Treatment. Re-issue, enlarged. Crown 8vo. cloth, 10*s.*

DR. ROBERT B. TODD, F.R.S.

I.

CLINICAL LECTURES ON THE PRACTICE OF MEDICINE. *New Edition, in one Volume, Edited by* Dr. Beale, *8vo. cloth,* 18*s.*

II.

ON CERTAIN DISEASES OF THE URINARY ORGANS, AND ON DROPSIES. Fcap. 8vo. cloth, 6*s.*

MR. TOMES, F.R.S.

A MANUAL OF DENTAL SURGERY. With 208 Engravings on Wood. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. TURNBULL.

I.

AN INQUIRY INTO THE CURABILITY OF CONSUMPTION, ITS PREVENTION, AND THE PROGRESS OF IMPROVEMENT IN THE TREATMENT. Third Edition. 8vo. cloth, 6*s.*

II.

A PRACTICAL TREATISE ON DISORDERS OF THE STOMACH with FERMENTATION; and on the Causes and Treatment of Indigestion, &c. 8vo. cloth, 6*s.*

MR. TUSON, F.C.S.

A PHARMACOPŒIA; including the Outlines of Materia Medica and Therapeutics, for the Use of Practitioners and Students of Veterinary Medicine. Post 8vo. cloth, 7*s.*

DR. TWEEDIE, F.R.S.

CONTINUED FEVERS: THEIR DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT. With Coloured Plates. 8vo. cloth, 12*s.*

DR. UNDERWOOD.

TREATISE ON THE DISEASES OF CHILDREN. Tenth Edition, with Additions and Corrections by Henry Davies, M.D. 8vo. cloth, 15*s.*

VESTIGES OF THE NATURAL HISTORY OF CREATION. Eleventh Edition. Illustrated with 106 Engravings on Wood. 8vo. cloth, 7*s.* 6*d.*

PROF. SCHROEDER VAN DER KOLK,

THE PATHOLOGY AND THERAPEUTICS OF MENTAL DISEASES. Translated by Mr. RUDALL, F.R.C.S. 8vo. cloth, 7*s.* 6*d.*

MR. WADE, F.R.C.S.

STRICTURE OF THE URETHRA, ITS COMPLICATIONS AND EFFECTS; a Practical Treatise on the Nature and Treatment of those Affections. Fourth Edition. 8vo. cloth, 7*s.* 6*d.*

DR. WAHLTUCH, M.D.

A DICTIONARY OF MATERIA MEDICA AND THERAPEUTICS. 8vo. cloth, 15*s.*

DR. WALKER, M.B.LOND.

ON DIPHTHERIA AND DIPHTHERITIC DISEASES. Fcap. 8vo. cloth, 3*s.*

DR. WALLER.

ELEMENTS OF PRACTICAL MIDWIFERY; or, Companion to the Lying-in Room. Fourth Edition, with Plates. Fcap. cloth, 4*s.* 6*d.*

MR. HAYNES WALTON, F.R.C.S.

SURGICAL DISEASES OF THE EYE. With Engravings on Wood. Second Edition. 8vo. cloth, 14*s.*

DR. WARING, M.D., M.R.C.P.LOND.

I.

A MANUAL OF PRACTICAL THERAPEUTICS. Second Edition, Revised and Enlarged. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

THE TROPICAL RESIDENT AT HOME. Letters addressed to Europeans returning from India and the Colonies on Subjects connected with their Health and General Welfare. Crown 8vo. cloth, 5*s.*

DR. WATERS, F.R.C.P.

I.

DISEASES OF THE CHEST. CONTRIBUTIONS TO THEIR CLINICAL HISTORY, PATHOLOGY, AND TREATMENT. With Plates. 8vo. cloth, 12*s.* 6*d.*

II.

THE ANATOMY OF THE HUMAN LUNG. The Prize Essay to which the Fothergillian Gold Medal was awarded by the Medical Society of London. Post 8vo. cloth, 6*s.* 6*d.*

III.

RESEARCHES ON THE NATURE, PATHOLOGY, AND TREATMENT OF EMPHYSEMA OF THE LUNGS, AND ITS RELATIONS WITH OTHER DISEASES OF THE CHEST. With Engravings. 8vo. cloth, 5*s.*

DR. ALLAN WEBB, F.R.C.S.L.

THE SURGEON'S READY RULES FOR OPERATIONS IN SURGERY. Royal 8vo. cloth, 10*s.* 6*d.*

MR. SOELBERG WELLS.

I.

A TREATISE ON THE DISEASES OF THE EYE. With Coloured Plates and Wood Engravings. 8vo. cloth, 24*s.*

II.

ON LONG, SHORT, AND WEAK SIGHT, and their Treatment by the Scientific Use of Spectacles. Third Edition. With Plates. 8vo. cloth, 6*s.*

MR. T. SPENCER WELLS, F.R.C.S.

SCALE OF MEDICINES FOR MERCHANT VESSELS. With Observations on the Means of Preserving the Health of Seamen, &c. &c. Seventh Thousand. Fcap. 8vo. cloth, 3*s.* 6*d.*

DR. WEST.

LECTURES ON THE DISEASES OF WOMEN. Third Edition. 8vo. cloth, 16*s.*

MR. WHEELER.

HAND-BOOK OF ANATOMY FOR STUDENTS OF THE FINE ARTS. With Engravings on Wood. Fcap. 8vo., 2*s.* 6*d.*

DR. WHITEHEAD, F.R.C.S.

ON THE TRANSMISSION FROM PARENT TO OFFSPRING OF SOME FORMS OF DISEASE, AND OF MORBID TAINTS AND TENDENCIES. Second Edition. 8vo. cloth, 10*s.* 6*d.*

DR. WILLIAMS, F.R.S.

PRINCIPLES OF MEDICINE: An Elementary View of the Causes, Nature, Treatment, Diagnosis, and Prognosis, of Disease. With brief Remarks on Hygienics, or the Preservation of Health. The Third Edition. 8vo. cloth, 15*s.*

DR. WINSLOW, M.D., D.C.L.OXON.

OBSCURE DISEASES OF THE BRAIN AND MIND. Fourth Edition. Carefully Revised. Post 8vo. cloth, 10*s.* 6*d.*

DR. WISE, M.D., F.R.C.P.EDIN.

REVIEW OF THE HISTORY OF MEDICINE AMONG ASIATIC NATIONS. Two Vols. 8vo. cloth, 16*s.*

MR. ERASMUS WILSON, F.R.S.

I.

THE ANATOMIST'S VADE-MECUM: A SYSTEM OF HUMAN ANATOMY. With numerous Illustrations on Wood. Eighth Edition. Foolscap 8vo. cloth, 12*s.* 6*d.*

II.

ON DISEASES OF THE SKIN: A SYSTEM OF CUTANEOUS MEDICINE. Sixth Edition. 8vo. cloth, 18*s.*

THE SAME WORK; illustrated with finely executed Engravings on Steel, accurately coloured. 8vo. cloth, 36*s.*

III.

HEALTHY SKIN: A Treatise on the Management of the Skin and Hair in relation to Health. Seventh Edition. Foolscap 8vo. 2*s.* 6*d.*

IV.

PORTRAITS OF DISEASES OF THE SKIN. Folio. Fasciculi I. to XII., completing the Work. 20*s.* each. The Entire Work, half morocco, £13.

V.

THE STUDENT'S BOOK OF CUTANEOUS MEDICINE AND DISEASES OF THE SKIN. Post 8vo. cloth, 8*s.* 6*d.*

VI.

ON SYPHILIS, CONSTITUTIONAL AND HEREDITARY; AND ON SYPHILITIC ERUPTIONS. With Four Coloured Plates. 8vo. cloth, 16*s.*

VII.

A THREE WEEKS' SCAMPER THROUGH THE SPAS OF GERMANY AND BELGIUM, with an Appendix on the Nature and Uses of Mineral Waters. Post 8vo. cloth, 6*s.* 6*d.*

VIII.

THE EASTERN OR TURKISH BATH: its History, Revival in Britain, and Application to the Purposes of Health. Foolscap 8vo., 2*s.*

DR. G. C. WITTSTEIN.

PRACTICAL PHARMACEUTICAL CHEMISTRY: An Explanation of Chemical and Pharmaceutical Processes, with the Methods of Testing the Purity of the Preparations, deduced from Original Experiments. Translated from the Second German Edition, by STEPHEN DARBY. 18mo. cloth, 6*s.*

DR. HENRY G. WRIGHT.

I.

UTERINE DISORDERS: their Constitutional Influence and Treatment. 8vo. cloth, 7*s.* 6*d.*

II.

HEADACHES; their Causes and their Cure. Fourth Edition. Fcap. 8vo. 2*s.* 6*d.*

DR. YEARSLEY, M.D., M.R.C.S.

I.

DEAFNESS PRACTICALLY ILLUSTRATED; being an Exposition as to the Causes and Treatment of Diseases of the Ear. Sixth Edition. 8vo. cloth, 6*s.*

II.

ON THROAT AILMENTS, MORE ESPECIALLY IN THE ENLARGED TONSIL AND ELONGATED UVULA. Eighth Edition. 8vo. cloth, 5*s.*

CHURCHILL'S SERIES OF MANUALS.

Fcap. 8vo. cloth, 12*s.* 6*d.* each.

"We here give Mr. Churchill public thanks for the positive benefit conferred on the Medical Profession, by the series of beautiful and cheap Manuals which bear his imprint."—*British and Foreign Medical Review.*

AGGREGATE SALE, 154,000 COPIES.

ANATOMY. With numerous Engravings. Eighth Edition. By Erasmus Wilson, F.R.C.S., F.R.S.

BOTANY. With numerous Engravings. By Robert Bentley, F.L.S., Professor of Botany, King's College. and to the Pharmaceutical Society.

CHEMISTRY. With numerous Engravings. Tenth Edition, 14*s.* By George Fownes, F.R.S., H. Bence Jones, M.D., F.R.S., and Henry Watts, B.A., F.R.S.

DENTAL SURGERY. With numerous Engravings. By John Tomes, F.R.S.

EYE, DISEASES OF. With coloured Plates and Engravings on Wood. By C. Macnamara.

MATERIA MEDICA. With numerous Engravings. Fifth Edition. By J. Forbes Royle, M.D., F.R.S., and F. W. Headland, M.D., F.L.S.

MEDICAL JURISPRUDENCE. With numerous Engravings. Eighth Edition. By Alfred Swaine Taylor, M.D., F.R.S.

PRACTICE OF MEDICINE. Second Edition. By G. Hilaro Barlow, M.D., M.A.

The **MICROSCOPE** and its **REVELATIONS.** With numerous Plates and Engravings. Fourth Edition. By W. B. Carpenter, M.D., F.R.S.

NATURAL PHILOSOPHY. With numerous Engravings. Sixth Edition. By Charles Brooke, M.B., M.A., F.R.S. *Based on the Work of the late Dr. Golding Bird.*

OBSTETRICS. With numerous Engravings. By W. Tyler Smith, M.D., F.R.C.P.

OPHTHALMIC MEDICINE and **SURGERY.** With coloured Plates and Engravings on Wood. Third Edition. By T. Wharton Jones, F.R.C.S., F.R.S.

PATHOLOGICAL ANATOMY. With numerous Engravings. By C. Handfield Jones, M.B., F.R.S., and E. H. Sieveking, M.D., F.R.C.P.

PHYSIOLOGY. With numerous Engravings. Fourth Edition. By William B. Carpenter, M.D., F.R.S.

POISONS. Second Edition. By Alfred Swaine Taylor, M.D., F.R.S.

PRACTICAL ANATOMY. With numerous Engravings. Second Edition. By Christopher Heath, F.R.C.S.

PRACTICAL SURGERY. With numerous Engravings. Fourth Edition. By Sir William Fergusson, Bart., F.R.C.S., F.R.S.

THERAPEUTICS. Second Edition. By E. J. Waring, M.D., M.R.C.P.

Printed by Blanchard & Sons, 62, Millbank Street, Westminster.